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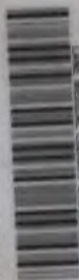
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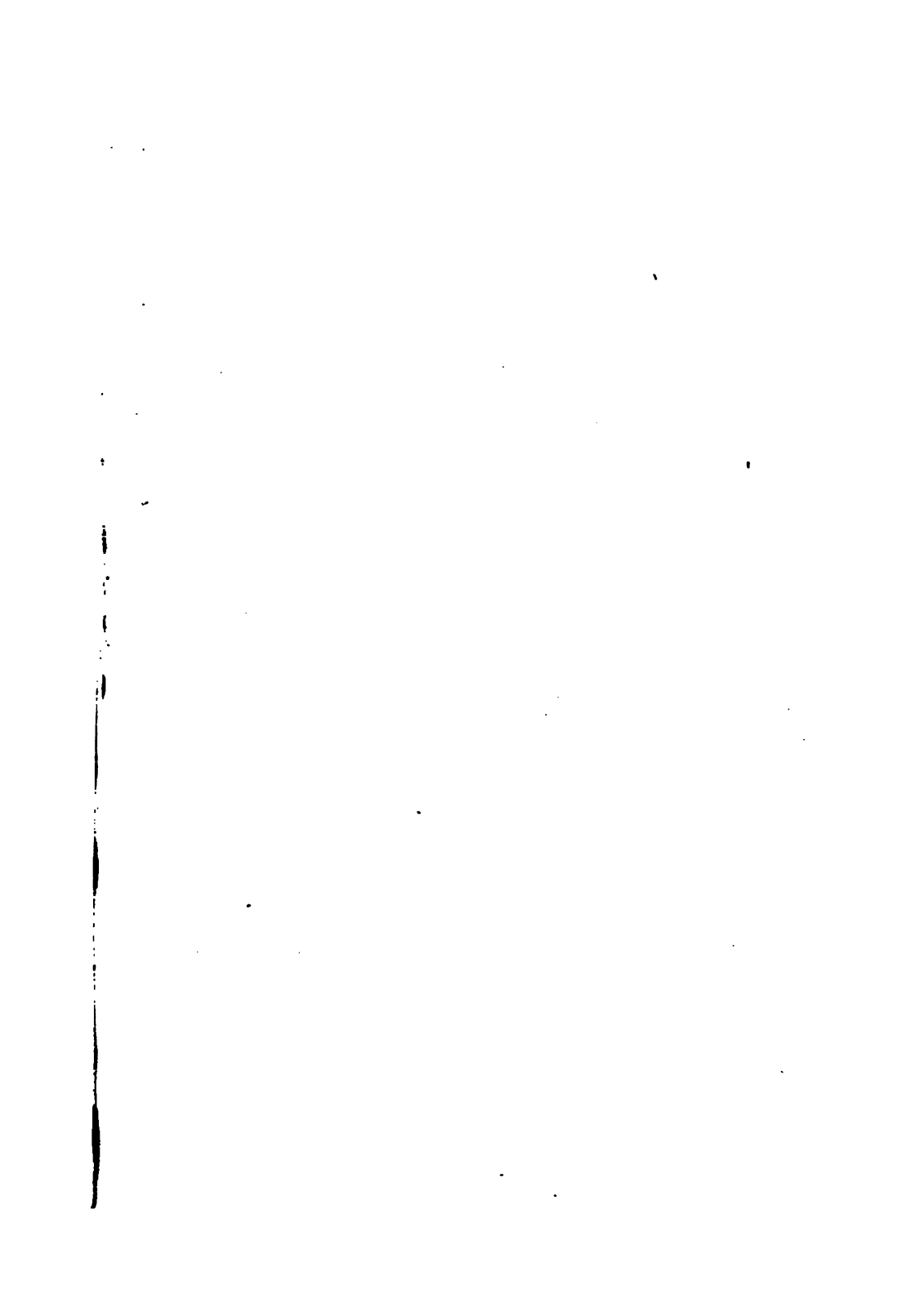


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Nurses' Manual of the Skin in Health and Disease

By

L. Duncan Bulkley, A.M., M.D.

Senior Physician to the New York Skin and Cancer Hospital, etc.

Illustrated

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PREFACE

THE object of this little book is to provide for nurses a simple and concise presentation of what has often been regarded as about the most difficult of all branches of medicine, and their relation thereto.

While no attempt has been made to present a complete study of Diseases of the Skin, the endeavor has been to supply what an intelligent nurse should know in regard to her share in securing the best results from treatment. Consequently, there is no reference to pathology, but little to etiology or prognosis, and practically nothing as to actual treatment, except as far as the nurse can aid the doctor in his work.

But, as the nurse should know something about all diseases, the endeavor has been made to mention the names of all of those affecting the skin, both those which are employed scientifically and those in popular use, whether rightly or wrongly applied; the diseases and their appearance are also described, as clearly as possible, that she may know their character and significance.

This little book becomes, therefore, an encyclopedia or dictionary for the nurse, that she may be intelligent in regard to the meaning of terms used by the profession or laity. If information is sought in regard to any particular matter, the index, which has been made especially full, will be found a ready guide. Very free use has been made of *italics*, both to call attention to the terms employed, and to emphasize items of particular importance to the nurse.

In some chapters pretty full directions are given of matters in which the nurse may prove of valuable assistance to the doctor.

In the final chapters, on "Diet and Hygiene" and "The Nurse and Diseases of the Skin," details are given which belong more particularly to the nurse. For fuller development of many points reference may be made to my larger books, "Compendium of Diseases of the Skin" and "Diet and Hygiene in Diseases of the Skin."

In the hope that this little book may be of much service to those for whom it was written, as it has been frequently called for by nurses who have attended my lectures to them at the New York Skin and Cancer Hospital, it is sent forth begging indulgence of reviewers for the partial presentation of one aspect of a great subject.

L. DUNCAN BULKLEY.

NEW YORK CITY, N. Y.

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NURSES' MANUAL OF THE SKIN IN HEALTH AND DISEASE

CHAPTER I

GENERAL CONSIDERATIONS

THE skin is one of the most important organs of the body, and has vital relations to health, while many of its diseases are closely connected with disorders of other organs, as will appear later.

Diseases appearing upon the skin are among the most common and often serious maladies that affect the human race, and their study is not to be slighted because some affections seem trivial and many others do not endanger life, while again many appear in those who are apparently in excellent health.

In order to properly appreciate this branch of medicine one has to remember that smallpox, scarlet fever, measles, and erysipelas are recognized by their skin symptoms, as also syphilis and leprosy, and that epithelioma, sarcoma, mycosis fungoides, and pemphigus destroy many lives each year; while eczema, lichen planus, pellagra, psoriasis, lupus, and a host of other diseases cause untold distress, disability, and disfigurement. Some of them interfere seriously with various occupations, while others prove quite a handicap to those thus afflicted.

Few recognize sufficiently the importance of the skin in its relation to the internal organs, and the intimate connection there is between them; as when we find intestinal ulceration consequent upon extensive burns of the surface,

and conversely, the remarkable influence which menstrual disturbance will sometimes exercise on cutaneous affections.

There are also occasionally very important indications from the skin which may be of infinite importance in reference to vital relations in the economy, so that often these may be, in reality, a "danger signal" from the skin. Thus in many instances an extensive *eczema* is but a sign of a general breakdown or nervous exhaustion, and a bad *acne* may indicate greatly disturbed assimilation or profound debility. A severe *exudative erythema* may first call attention to a vascular excitement which if unchecked may lead to apoplexy, and a small syphilitic lesion will indicate an infection which if not controlled may result in most serious damage to the eye, brain, spinal cord, or other portions of the body, etc.

Although skin affections are too often lightly regarded as local affairs, the relationship between the skin and the general system is practically recognized in an imperfect way in general practice, to a greater or less degree. Thus, the free action of the skin marks the crisis in fever and the advance of tuberculosis; the dry, harsh skin in chronic Bright's disease and diabetes is well known, as also the relief secured in renal troubles by free diaphoresis or sweating; the pigmentary changes of the skin in Addison's disease and the yellow staining in jaundice are infallible signs, etc. In animals the condition of the hairy coat affords much information, on which the intelligent veterinarian acts, and the clear, active skin of young people in most perfect health and vigor is a matter of common observation.

Diseases of the skin are too often regarded as separate and distinct affairs, peculiar and different from other affections, but a careful student will soon realize that the many different forms presented signify only different phases of pathologic action quite akin to those which occur in other portions of the human frame. Some are due to the action of local parasites, animal or vegetable,

or micrococci; others to vascular and nervous derangements; and some result from the action of external irritants. The nurse needs only to know that they all represent various forms of human suffering from various causes, which it is a duty and pleasure to relieve by her assiduous attention.

Diseases of the skin are too often regarded as disgraceful, obnoxious, offensive, and possibly dangerous to others, and the question is continually asked if such and such an eruption is contagious or infectious. But those who have had much to do with this class of diseases never think of such matters, and in the nearly forty years' existence of the New York Skin and Cancer Hospital none of those connected with the institution have ever been infected, not even from the many cases of true leprosy which in times past have been in its wards.

True it is that a certain few of this class of diseases are more or less infectious, or contagious, but even with these, with reasonable precautions, there is practically no danger, as multitudes of nurses and doctors will testify. This matter will be referred to later in connection with different diseases; where there is any danger, that will be pointed out; where there is none, it will not be necessarily mentioned. Of course, all are familiar with the dangers from the eruptive fevers, smallpox, scarlet fever, measles, and erysipelas. The only others to mention here are ringworm, scabies, and syphilis, which will be treated of later. Pemphigus is often feared, but no one has ever heard of its being communicated from one person to another.

The trained nurse, of course, attends the case in order to supplement and carry out the instructions of the doctor, whose orders are supreme. But in many matters in connection with the local or external treatment of the skin there is some room for latitude in regard to the employment of applications, in which a highly intelligent and careful nurse can materially aid in their success, and a thoughtless or careless nurse can vitally hinder the satisfactory progress of a case.

Pain is always an indication that something is wrong somewhere, and itching is also only another cry of the nerves for relief. In the majority of cases the physician aims to relieve or overcome both, though his efforts may not always be successful. The nurse is there, between his visits, not only to carry out directions but also to observe the effect of remedies, and to seek to use one or another of them in such a manner as to affect the result desired. If, therefore, a new application should not have the effect expected, and should irritate instead of soothe, after a reasonable length of time she undoubtedly has the right and duty to make a temporary change to a former remedy known to be acceptable, returning to the new one for a further trial, unless express orders have been given to the contrary; she, of course, records all this, and calls special attention to it at the next visit. But officious meddling with treatment of any kind cannot be tolerated.

There is the greatest difference in the results obtained from various local applications according to the manner in which they are employed or applied, and in this respect the nurse thoroughly trained in regard to handling diseases of the skin can often aid in the case greatly, while another can actually hinder the progress toward recovery by careless or unwise modes of procedure. This is such an important subject that a chapter will be given to it at the end of the book.

CHAPTER II

ANATOMY AND PHYSIOLOGY OF THE SKIN

ANATOMY OF THE SKIN

WHILE it is not necessary for the nurse to know and understand perfectly the anatomy of the skin and its pathology, a certain amount of knowledge will help in appreciating some of the matters treated of later.

The skin is generally thought of as simply a covering for the rest of the body, an envelopment which serves to enclose and protect the parts within, and to give symmetry, shape, and beauty to the human form. While it is all this, it is also very much more. It is the largest single excretory organ of the body, and upon the proper performance of its functions depends, to a large degree, the health and well-being of the individual.

To fulfil its many duties the skin is composed of a number of different elements, as shown in Fig. 1, representing a greatly magnified section through the skin and subcutaneous tissue. It contains excretory glands, and organs of sensation or touch, and has, as appendages, the hair and nails, all to serve definite purposes. In certain localities it undergoes changes in structure according to the necessities of the case; thus, on the palms, soles, and buttocks it is thick and resisting, and readily forms callus to protect the soft parts below, as is seen in those engaged in certain occupations. On the other hand, it is very thin and delicate in the eyelids and in certain other regions. The hairs and nails are but modifications of the epithelial elements. At the orifices of the body, as at the nose, mouth, urethra, vulva, and anus, its anatomy is altered to conform to the requirements of the parts, and the mucous membranes result, which are, indeed, but altered skin,

whose diseases are often closely allied to or are connected with those of the outer integument.

The skin is constantly renewed from within, as its outward cuticle is continually shed, and by its wonderful

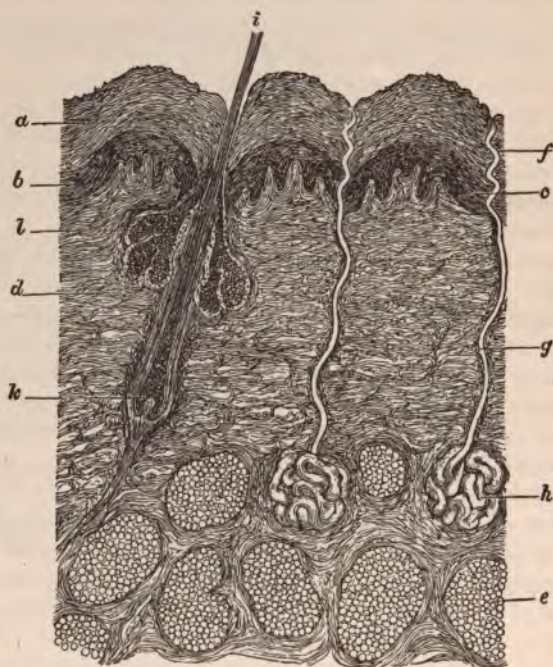


Fig. 1.—Section perpendicularly through the healthy skin: *a*, Epidermis, or scarf-skin; *b*, rete mucosum, or rete malpighii; *c*, papillary layer; *d*, derma, corium, or true skin; *e*, panniculus adiposus, or fatty tissue; *f*, *g*, *h*, sweat-gland and duct; *i*, *k*, hair, with its follicle and papilla; *l*, sebaceous gland.

vitality it is able to resist the many agencies which ever tend to destroy its integrity. To appreciate this latter remark let anyone note the result of injuries to a kid glove, and compare with it the power of the human skin in resisting and repairing harm done to its structure.

The skin is composed, in the main, of two layers, quite different in their structure and composition. The lower or deeper one is called the *corium*, *cutis vera*, *true skin*, or *derma*, and the outer one is named the *epidermis* (Greek *epi*, upon, and *derma*, skin). Both of these layers are subject to disease, the outer layer mainly through the influence of external agents, as micro-organisms and local irritants, and the deeper mainly through the influence of internal or constitutional causes.

The *derma*, or *corium*, the inner or deeper portion, which constitutes the leather of commerce, is firm and elastic and is composed of densely interwoven connective-tissue fibers, which interlace and form a texture resembling felt. In the outer portion of this *corium* the external surface rises into minute prominences, called the *papillæ* of the skin, into which minute blood-vessels and nerves enter; this is called the *pars papillaris*. At its deepest portion the fibers are separated, and between them are found fat globules, constituting the *panniculus adiposus*, adipose or fatty tissue; it is this which increases when a person grows fat. In this true skin are situated the sweat and sebaceous glands and the hairs, to be described later; as also the nerves, blood-vessels, and lymphatics, or absorbents of the skin. This true skin is very tough, and yet so elastic as to yield to every movement, and still to regain its former position and state with a perfection which could not be excelled. The extent of this suppleness can be best appreciated when the skin becomes altered by disease, as is not at all uncommon when in certain cases it is what is called *hide-bound*, as in *scleroderma*; also in *eczema* it has so changed its state that every movement at an affected joint will cause deep and painful cracks or fissures.

The *epidermis*, *cuticle*, or *scarf-skin* has no fibers, but is composed of separate elements called epidermic cells. The deeper cells are more or less rounded or many sided and succulent, and compose what is known as the *rete mucosum* or *rete malpighii*; this layer rests directly upon

the papillæ of the corium, and dips down between them. In the cells of the deepest layer is found the pigment, which is more or less natural in some places in the white skin, and is abundant in dark skinned races. In certain diseases, as in freckles, *chloasma*, or patches on the face, etc., pigment is here deposited which it is extremely difficult to remove.

Many diseases affect this outer, epidermal layer alone, such as those from micro-organisms, while many others primarily located in the corium or derma raise the epidermis with a watery fluid, as in *cold sores*, *shingles*, *chicken-pox*, *eczema*, etc., in this last-named disease this layer may be largely removed, and we have a raw, weeping surface, which, however, heals without a scar, as only the epidermal layer is destroyed.

Returning now to the *corium*, or true skin, we find in it a number of elements which should be understood.

The blood- and nerve-supply of the skin is exceedingly abundant, and is of the utmost importance in its relation to its diseases. Its very great richness in these elements may be judged from the fact that even a fine needle cannot be introduced into the skin without drawing blood and causing pain. The blood-vessels coming from below form capillaries everywhere, and rise into the papillæ. The outer or epidermal layer contains no blood-vessels, its cells being nourished indirectly from the layers beneath, by the papillæ.

The *nerves of the skin* preside over its nutrition, provide general sensation which protects the parts from injury, and furnish the sense of touch. The larger nerves are confined to the corium, but nerve elements have been traced beyond the true skin, even among the cells of the *rete malpighii*, also into the sheaths of the hair-follicles and in the sebaceous glands. They rise up into the papillæ and in many of these are found masses of nucleated cells into which the medullated nerve-fiber runs, forming what is known as *tactile corpuscles*, upon which the sense of touch depends. There are also thought to be *trophic*

nerves, which control nutrition, and *vasomotor nerves*, which regulate the blood-supply, as is seen in blushing, and which have much to do with many diseases of the skin.

The *lymphatics* of the skin are very numerous, and are of importance in connection with its pathology. They are very abundant both throughout the corium and as lymph-spaces between the cells of the epidermis, sebaceous and sweat-glands, and the hair-follicles. We see the lymphatic element exhibited in the multiple adenopathy of *syphilis* and *cancer*, and the milder swellings accompanying certain inflammatory conditions, as the enlarged glands at the back of the neck in *pustular eczema* and other diseases of the scalp.

Muscular fibers exist in the corium, which in some animals are so developed that they can move the skin somewhat, and thus assist in shaking off dust, insects, etc. The greatest development of the muscular fiber in the skin is found in the *arrectores pilorum*, which can be better described later on in connection with the sebaceous glands and hair-follicles.

Hair and Hair-follicles.—The relation of the hair-follicles to the integument can be best understood by imagining the lower or fibrous portion of the skin to be soft and plastic, and the upper or epidermal layers to be pushed down into it without breaking, around a penetrating hair; the sheaths of the hair are thus seen to be cellular, and to a certain extent to correspond to the layers of the skin.

At the bottom of the follicle the fibers of the corium rise and form the *hair papilla*, from which the hair takes its growth. This contains nourishing blood-vessels, and extends into, and is embraced by, the lower portion of the hair.

When the hair is shed or extracted under healthy conditions this papilla produces a new hair, and will continue to do so repeatedly. Thus, when the hair is plucked from a lady's face it regrows even more strongly again and again; the same occurs when hair is removed by shaving, or with

the aid of the advertised depilatories, which can never be permanently effectual, because the hair papilla remains, ever ready to reproduce a hair. The only efficient method of reaching the difficulty is to destroy or obliterate the papilla by electrolysis, an electric needle being inserted in each follicle deep enough and with current strong enough to accomplish this result.

The hair itself is composed, like the epidermis, of cells; at its deepest portion within the follicles these are seen to be quite round or polygonal, and are soft and succulent. Those further outward are more flat and compressed, until finally all the cells are so flattened and condensed together that they appear like fibers, and these comprise the entire length of the hair, however great.

Hairs exist on almost every portion of the body, with few exceptions, as on the palms and soles, though in some situations they are so fine as to be hardly discernible. The number of the hairs is exceedingly great, varying vastly in different individuals. Between 700 and 800 have been counted on a single square inch of the scalp, and the total number there has been estimated at between 90,000 and 120,000. Hair is very strong, yet very elastic; a single hair has supported a weight of over 2 ounces, and repeated instances have occurred where the scalp has been torn off by means of the hair, so firmly is the healthy hair attached; yet in disease it may fall with the slightest touch or break with the gentlest traction.

Sebaceous or Oil Glands (Fig. 2).—These are irregularly shaped masses of glandular structure, with a single excretory duct; they are almost invariably connected with hairs of some size. Upon the hairy scalp they form appendages to the hairs, and discharge the secretion into the hair-follicles; generally there are two to each hair, situated on opposite sides, sometimes there are more. In other places, where the hairs are fine and rudimentary, the sebaceous glands are relatively large, as on the face, and the tiny hair appears as an appendage.

All the sebaceous glands are very minute affairs, mostly

situated in the outer layers of the corium. The secretion from these glands is of an oily nature, and when in a healthy condition is fluid at the body temperature, and its main function is to keep the skin and hair in a flexible

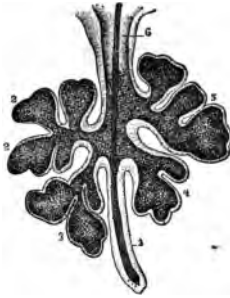


Fig. 2.—Large sebaceous gland greatly magnified: 1, Hair in its follicle; 2, 3, 4, 5, lobules of the gland; 6, excretory duct traversed by the hair.

state. When these glands fail to act we have a dry, hard condition, known as *xeroderma*; when the secretion is deranged and sluggish we have dandruff, or *dermatitis*



Fig. 3.—Sebaceous gland, with a small hair attached, greatly magnified: 1, Hair; 2, sebaceous gland.

seborrhæica, and when the secretion is further altered it hardens and is retained, forming *comedo*, *blackheads*, or *flesh-worms*, and when these are inflamed we have *acne*.

The muscles of the skin, previously alluded to as con-

nected with the hair-follicles and sebaceous glands, and called *arrectores pilorum*, are attached to the lowest part of the hair-follicles, and running obliquely, are inserted in the upper layer of the corium, embracing the sebaceous glands; when they contract the contents of the latter are more or less forced out. On those portions of the body, such as the face, back, and chest, where the glands are very large, and the hairs insignificant, the glands lose this

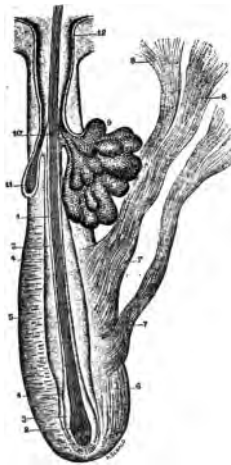


Fig. 4.—Hair in its follicle, sebaceous glands, and muscle, from the scalp: 1, 2, 3, 4, 5, 6, Hair and its follicle; 7, 8, muscles, *arrectores pilorum*; 9, 10, 11, sebaceous glands; 12, opening of hair-follicle and duct for sebaceous glands.

aid and very readily become clogged, causing *comedo*, *blackheads*, and *acne*. When these muscles contract violently, as under the influence of cold or excitement, the hairs become more or less erect, forming *goose skin*, as seen when the surface is chilled, and this action may often be observed in certain animals, as the cat and dog, when irritated, causing the hairs to stand up.

Sudoriparous or Sweat-glands.—These are in the form of minute tubes, coiled up in the deepest portion of the

corium, and after making several spiral turns, open directly upon the surface. These glands are very numerous in some locations; on the soles and palms there are about 2700 to the square inch; on the legs, about 550 in the same space, and on the forehead about 1500.



Fig. 5.—Sweat-glands from the palm of the hand, magnified twenty times: 1, Horny layer of epidermis; 2, rete mucosum; 3, papillary layer; 4, derma, or true skin; 5, subcutaneous cellular tissue; 7, fat globules; 6, 8, 9, sudoriparous or sweat-glands.

According to careful computation their total number amounts to over 2,000,000; the total length of the minute tubes when uncoiled has been estimated at about $2\frac{1}{2}$ miles.

The action of the little glands is not intermittent, but continuous, and sweat is incessantly exhaled in the form of vapor or insensible perspiration. It is only when the

body becomes much heated, as by exercise or otherwise, or by great mental excitement, or in disease, that the perspiration manifests itself to the eye or touch. The total quantity of the fluid exhaled by the skin is subject to the greatest variations, according to temperament, moisture, quantity and quality of food and drink taken, etc. The average person in health gives off through the skin ordinarily about 2 pints or pounds of fluid daily, a quantity almost equal to that excreted by the kidneys. When animals are completely covered with an impermeable coating, as by varnishing, death takes place; and the

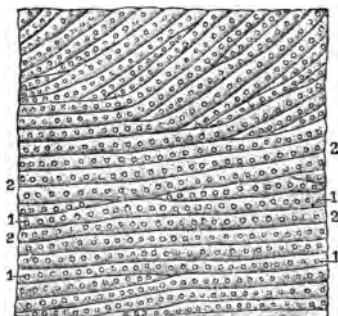


Fig. 6.—Openings of the sweat-glands on the palm of the hand, magnified four times: 1, Openings of glands; 2, furrows between the lines of openings.

story is current among physiologists that a child who was covered with gold-leaf, in order to represent an angel in the coronation ceremonies of Pope Leo X, died a few hours after the coating had been applied.

Nails.—The nails resemble the hairs very closely in many respects, and are but altered portions of the epidermis, composed of hard horny matter, arranged in the form of cells. They rest upon their nail-beds in much the same manner as the epidermis or scarf-skin lies on the true skin or corium.

We speak of the *root* and the *body* of the nail, the root

being that portion toward the trunk and situated beneath the skin. The body of the nail, which represents the section of the hair within the follicle, is the attached portion, while the free extremity of the nail, which custom and convenience removes frequently, corresponds to the free portion of the hair. The *matrix*, or nail-bed, is that upon which the nail rests, and to which it is firmly attached. Nails grow from the roots, just as the hairs, and only slide over their matrix or bed, so that injuries to the matrix need not cause a disfigured nail, other than of the portion directly injured, but injury or disease at its root will generally cause a destroyed or deformed nail. All the structures of the skin, including the nails, are liable to be diseased, as will be considered later.

PHYSIOLOGY OF THE SKIN

The physiology of the skin has intimate relations both to dermatology and to general medicine, which it is important to remember.

The skin plays a very great part in regulating the temperature of the body. Thus, while the internal organs and tissues day by day and hour by hour are producing heat by oxidizing, or burning up food (just as the same food would give off heat if burned in a fire), the skin is continually giving off heat, and by the proper balance of the body is always kept at an even point—about 99° F. It can, therefore, be readily understood how a chilling, or “check of perspiration,” can act harmfully by throwing extra work on other organs. As a great emunctory organ, the skin shares very largely with the kidneys and lungs in removing the superfluous water from the system. The skin and kidneys each excrete somewhere between 1 and 3 pounds of liquid daily, while the lungs perhaps two-thirds as much. These three great agents act in harmony and interchange their duties to a greater or less degree. Thus, in damp, cold weather, when the skin perspires less, the kidneys are more active, as also are the lungs; in summer, again, when the perspiration may be profuse,

it is a common observation to find the urine more scanty. This vicarious action of the organs is frequently taken advantage of in medicine, as when in kidney disease we cause the skin to act profusely, and remove water which threatens dropsy; also in pneumonia, where power for work of the lungs is seriously impaired, the action of the skin is excited by moist heat. Again, in many diseases of the skin great advantage results from remedies which increase the action of the kidneys and bowels. Very considerable impression, also, can be made upon the general system by acting on the skin, as by baths, the cold pack, etc.; advantage may also be taken of the absorbing power of the skin for the introduction of remedies through this channel, and nutrition also may be greatly affected by fatty inunctions.

The beneficial effects often observed in certain skin diseases from the use of *mineral waters* in bathing and drinking must not be wholly attributed to their action upon the skin alone. It is to be remembered that the whole skin, as an organ, is often affected favorably by the action of the water, and so performs its work better, while the kidneys and bowels are also stimulated to action thereby, and so all aid in the general improvement of the system. Even when used externally alone, other organs are more or less influenced by the mineral water, as it has been definitely shown that the urine can be affected both in its liquid and solid elements by means of bath and wet packs. But the value of mineral waters and baths in diseases of the skin is greatly overestimated by the laity, and those best acquainted with dermatology seldom advise their use.

CHAPTER III

NOMENCLATURE AND STATISTICS OF DISEASES OF THE SKIN

THE nurse has not much to do with nomenclature and statistics of any disease, her function being to carry out the directions of the physician, and to attend to the comfort and well-being of the patient. But it is desirable to be acquainted with the names of diseases; so these will be briefly considered, and it is interesting to know something of their relative frequency.

In times past very much confusion and some of the difficulty attending the study of dermatology have resulted from the number and variety of terms which have been applied to these diseases by different authors. Happily at the present time this error is appreciated by the majority of those who write and teach this branch, and the subject is more simplified. Unfortunately, however, the number of names is necessarily large, simply because of the great number and variety of changes which can occur in the skin, which are quite distinct from one another.

Unfortunately, also, for the laity the names given to diseases and the terms used in medicine are largely taken from the Latin and Greek languages, and these are still adhered to as being the best for international reasons, in order that doctors of every nation may understand one another. As far as possible, however, an English equivalent will be given, and so, in order that all may be clear, some definitions must first be given.

All eruptions are composed of what are called *lesions*, or changes produced in the texture of the skin by disease or otherwise. Of these, two kinds are commonly spoken of:

first, *primary lesions*, the direct results of disease; second, *secondary lesions*, which represent a more or less consequent condition.

A. PRIMARY LESIONS OF THE SKIN

1. *Macula*.—Macules or spots are of various sizes, colors, and shapes, generally neither elevated nor depressed. These may be congestive, hemorrhagic, or pigmentary.

2. *Papula*.—Papules or pimples are small elevations of the skin, inflammatory or neoplastic.

3. *Vesicula*.—Vesicles or small blisters consist of slight elevations of the epidermis, with clear fluid contents.

4. *Bulla*.—Blebs or bullæ; or larger water-blisters, are so called from the resemblance to bubbles on the surface of agitated water. They may be of any size, from that of a pea upward.

5. *Pustula*.—Pustules represent small, round elevations of the epidermis, containing pus.

6. *Pomphus*.—A wheal. The flat, solid, slightly elevated lesions of *urticaria* or *nettle-rash* are called *wheals* or *pomphi*.

7. *Tuberculum*.—A tubercle. This term, which has no relation to tuberculosis, refers to small, solid elevations of the skin, larger than papules.

8. *Phyma*.—A tumor. This is a larger swelling upon or in the skin, and may be of any size larger than a tubercle. Generally masses larger than a large pea are spoken of as tumors.

B. SECONDARY LESIONS OF THE SKIN

1. *Tinctura*.—A stain. A discoloration of the skin, left after a preceding lesion of the skin.

2. *Squama*.—A scale. A portion of the epidermis more or less detached.

3. *Crusta*.—A crust. A dried mass, generally of pus and epidermis, the product of some disease of the skin.

4. *Infiltratio*.—Infiltration. A thickening and hardening of the skin from disease. In this the normal supple-

ness and elasticity are lost, and the skin may readily break or crack.

5. *Fissura*.—A fissure or crack in the skin consequent upon previous infiltration.

6. *Excoriatio*.—~~E~~coriation or rawness of the skin, with perhaps superficial ulceration, generally caused by scratching or injury.

7. *Ulcus*.—An ulcer. An excavation in the skin made by disease. *Ulcers* generally extend deep into or through the *corium* or *true skin*, and leave a scar.

8. *Cicatrix*.—A scar. A new growth made up of hard, fibrous tissue, which replaces that lost by disease or injury.

All diseases of the skin will be found to be made of these elements, sometimes of a single one alone, but far more often of several combined. Especially do we find those belonging to these two classes intermingled, namely, *primary lesions* combined with their results, or *secondary lesions* of the skin, and the latter may be quite as characteristic of the disease as the former.

The *nomenclature* of diseases of the skin has always been quite a stumbling-block in their study, although nomenclature has been devised in order to properly classify this class of affections, for the very many different diseases differ immensely in their characters, appearances, and causes. It is not necessary for nurses to know or care to understand the classification of diseases of the skin, but in order that a comprehensive knowledge of these relations may be gained when desired, one is given which covers all the ground. The groups and the various diseases will be indicated clearly by the headings of the different chapters and sections to follow.

Class	I.	MORBI CUTIS PARASITICI.	Parasitic Affections.
"	II.	MORBI GLANDULARUM CUTIS.	Glandular Affections.
"	III.	NEUROSES.	Neurotic Affections.
"	IV.	HYPEREMIE.	Hyperemic Affections.
"	V.	EXUDATIONES.	Exudate or Inflammatory Affections.
"	VI.	HEMORRHAGIE.	Hemorrhagic Affections.
"	VII.	HYPERTROPHIE.	Hypertrophic Affections.
VIII.	ATROPHIE.	Atrophic Affections.	
IX.	NEOPLASMATA.	New Formations.	

A. VEGETABLE.

1. *Tinea trichophytina* (or *trichophytosis*) (*parasite*—*Trichophyton tonsurans*). { *corporis* (or *tinea circinata*).
capitis (or *tinea tonsurans*).
barbæ (or *sycois parasitica*).
cruris (or *eczema marginatum*).
2. *Tinea favosa* (*parasite*—(or *favus*) *Achorion Schonleinii*).
3. *Tinea versicolor* (or *chromophytosis*) } (*parasite*—*Microsporon furfur*).

B. ANIMAL.

1. *Phthiriasis* (or *pediculo-* { *corporis* } (*parasite*—*Pediculus*).
sis). { *capitis*
pubis
2. *Scabies* (*parasite*—*Acarus scabiei*).

A. DISEASES OF THE SEBACEOUS GLANDS.	I. Due to faultry secretion or excretion of sebaceous matter.	1. Acne sebacea	{ oleosa cerea cornea exsiccata (or xeroderma).	(or seborrhœa).
		2. Acne punctata	{ nigra (or comedo). albida (or milium).	
		3. Acne molluscum	(or molluscum sebaceum).	
B. DISEASES OF THE SWEAT GLANDS.	II. Due to inflammation of sebaceous glands with surrounding tissue.	{ 4. Acne simplex (or vulgaris). 5. Acne indurata. 6. Acne rosacea.		
		I. As to quantity of secretion.	{ 1. Hyperidrosis. 2. Anidrosis.	
		II. As to quality of secretion.	{ 3. Bromidrosis. 4. Chromidrosis.	
	III. With retention of secretion.	{ 5. Dysidrosis. 6. Sudamina.		

1. Zoster (herpes zoster or zona).
2. Pruritus.
3. Dermatalgia.
4. Hyperæsthesia cutis.
5. Anæsthesia cutis.
6. Dystrophia cutis (or trophic disturbances).

CLASS IV. *Hyperæmiæ*. Hyperemic Affections.

A. ACTIVE. { 1. Erythema simplex (idiopathicum.
2. Roseola. (traumaticum.

B. PASSIVE. { 1. Livedo mechanica.
2. Livedo calorica.

CLASS V. *Exsudationes*. Exudative or Inflammatory Affections.

A. INDUCED BY INFECTION OR CONTAGION. { 1. Rubeola (or measles).
2. Rubella (or rôtheln).
3. Scarlatina.
4. Variola.
5. Varicella.
6. Vaccinia.
7. Pustula maligna.
8. Equinia (or glanders).
9. Diphtheritis cutis.
10. Erysipelas.
11. Syphilis.

B. OF INTERNAL OR LOCAL ORIGIN.	I. Erythematous.	{ 1. Erythema (multiforme. 2. Urticaria. nodosum.
	II. Papular.	{ 3. Lichen (simplex. 4. Prurigo. planus. ruber. scrofulosus.
	III. Vesicular.	{ 5. Herpes (febrilis. iris. progenitalis. gestationis.
	IV. Bullous.	{ 6. Hydroa. 7. Pemphigus (vulgaris. 8. Pompholix (foliaceus. (or cheiropompholix).
	V. Pustular.	{ 9. Sycosis. 10. Impetigo. 11. Impetigo contagiosa. 12. Ecthyma.
	VI. Erythematous, papular, ves- icular, pustu- lar, etc.	{ 13. Eczema. 14. Dermatitis (calorica. venenata. traumatica.
	VII. Squamous.	{ 15. Dermatitis exfoliativa (or pityriasis rubra). 16. Psoriasis. 17. Pityriasis capitis.
	VIII. Phlegmonous.	{ 18. Furunculus (furunculosis). 19. Anthrax.
	IX. Ulcerative.	{ 20. Ulcus (simplex. 21. Onychia. venereum.

CLASS VI. Hæmorrhagiæ. Hemorrhagic Affections.

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|------------------------------------|--|---------------|
| 1. Purpura | simplex.
papulosa.
rheumatica (or peliosis rheumatica).
hæmorrhagica. | |
| 2. Hæmatidrosis (or bloody sweat). | | 3. Scorbutus. |

CLASS VII. Hypertrophizæ. Hypertrophic Affections.

- | | | |
|------------------------------------|--|---|
| A. OF PIGMENT. | 1. Lentigo.
2. Chloasma.
3. Melanoderma. | 4. Nævus pigmentosus.
5. Morbus Addisonii. |
| B. OF EPIDERMIS
AND
PAPILLÆ. | 1. Keratosis pilaris (or lichen pilaris).
2. Ichthyosis.
3. Cornu cutaneum.
4. Clavus.
5. Tylosis (or callositas). | 6. Verruca {vulgaris.
senilis.
acuminata.
necrogenica. |
| C. OF CONNECTIVE
TISSUE. | 1. Scleroderma.
2. Sclerema neonatorum.
3. Morphœa. | 4. Elephantiasis (Arabum).
5. Dermatitis.
6. Frambœsia (or yaws). |
| D. OF HAIR. | 1. Hirsuties. | 2. Nævus pilosus. |
| E. OF NAIL. | 1. Onychogryphosis. | 2. Onychiauxis. |

CLASS VIII. Atrophizæ. Atrophic Affections.

- | | |
|----------------|--|
| A. OF PIGMENT. | 1. Albinismus.
2. Leucoderma (or vitiligo).
3. Canities. |
| B. OF CORIUM. | 1. Atrophia cutis {propria.
linearis (or striæ atrophicæ).
maculosa (or maculæ atrophicæ).
2. Atrophia senilis. |
| C. OF HAIR. | 1. Alopecia.
2. Alopecia areata.
3. Trichorexis nodosa (atrophia pilorum propria, or fragilitas crinium). |
| D. OF NAIL. | Onychatrophia. |

CLASS IX. Neoplasmata. New Formations.

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|-------------------------------|---|---------------------------------------|
| I. BENIGN NEW FORMATIONS. | | |
| A. OF CONNECTIVE
TISSUE. | 1. Keloid.
2. Fibroma (or molluscum fibrosum).
3. Xanthoma (xanthelasma or vitiligoidea). | |
| B. OF GRANULATION
TISSUE. | 1. Lupus {vulgaris.
erythematosus.
2. Rhinoscleroma. | 3. Scrofuloderma.
4. Syphiloderma. |
| C. OF BLOOD-
VESSELS. | 1. Nævus vasculosus.
2. Angioma.
3. Telangiectasis. | |
| D. OF LYMPHATICS. | 1. Lymphadenoma cutis.
2. Lymphangioma cutis. | |
| E. OF NERVES. | Neuroma cutis. | |
| II. MALIGNANT NEW FORMATIONS. | | |
| 1. Lepra | {tuberosa
maculosa } (or elephantiasis Græcorum). | |
| 2. Carcinoma | {epitheliomatousum (epithelioma and rodent ulcer).
papillomatousum (or papilloma). | |
| 3. Sarcoma. | {idiopathicum.
pigmentosum (or melanosis). | |

STATISTICS OF DISEASES OF THE SKIN

Statistics are generally dry reading, but their analysis often affords much instruction, and it is interesting for the nurse to know something in regard to the relative frequency of the maladies with which she may come in contact.

Something over one hundred and twenty-five different affections of the skin appear on the tabular list of 30,000 cases, one-half from private and one-half from public practice, from which the following deductions are made. Many of these are very frequent, some exceedingly rare. Some of them are very important, often causing great distress and even endangering life and causing death, while others are very trifling and insignificant. Certain of them are extremely rebellious to treatment, while others yield very readily. Some of them are purely local affairs, but the majority of cases have important constitutional relations, and can never be cured by local measures alone. All of these points will be more or less fully considered in the chapters on the different classes of diseases of the skin.

In regard to sex the patients were remarkably evenly divided, 15,250 males to 14,750 females, but in individual diseases great differences will be found. Thus, in *acne* the females are almost three times the number of males, while with *syphilis* there were more than twice as many males as females.

In *eczema* the sexes are pretty evenly divided, 4403 males to 3990 females. *Chloasma* is seen to be almost exclusively an affection belonging to females, there being 140 cases to 9 of males, while *sycosis* belongs to the male sex. There is also quite a difference in the relative frequency of certain skin affections in private and public practice.

The relative frequency of the different diseases is also a matter of interest.

Eczema always comes first in point of frequency in all statistics, with 8393 of the 30,000 cases, or about 28 per cent. of the whole. The real frequency of the disease, however, is possibly much greater than here indicated;

it probably forms more than one-third, or one-half or more, of all skin affections, as seen by the nurse, since the many cases of infantile eczema in family practice do not find their way into the statistics of the specialist.

Acne is the next most common disease here presented, with 4650 cases, or 15.5 per cent. of the whole. Here again statistics fail to give the correct proportion owing to the general neglect of the eruption. In private practice it is formed over 20 per cent., and in public practice less than 10 per cent.

Syphilis comes next in frequency, with 2992 cases, or about 10 per cent. of the whole, the proportion being much larger in public than in private practice.

Parasitic diseases form about 7 per cent. of all. Of these, the animal parasitic diseases were 1159 and the vegetable 992.

Scabies, or the *itch*, gave 795 cases, or 2.6 per cent.; of these, 128 cases were in private and 627 in public practice.

Alopecia, in various forms, made almost 4 per cent. of the cases in private practice; naturally these appear much less frequently in hospital practice.

Psoriasis follows in frequency, with 1079 cases; this makes the percentage but 3.5, showing the disease to be relatively infrequent compared to *eczema*.

The eruptions due to vegetable parasites appear next in frequency, with 992 cases, or 3.3 per cent. The number of these in public clinics was only a little greater than in private practice, but the disproportion would be very much greater if the many hundred unrecorded cases seen in various public institutions, schools, asylums, etc., were included in this analysis.

Urticaria is probably very much more common than would be judged from the 592 cases, or 1.97 per cent., appearing in this table, for many do not think it necessary to seek medical advice for "*hives*."

The remainder, even of the commonly known eruptions, appear in still smaller proportions, under 2 per cent., and

a number of the very rare cutaneous maladies occurred only once or twice among the entire 30,000 cases analyzed.

Zoster, or shingles, formed not 1 per cent. of the 30,000 cases, although the eruption is so startling and painful that those affected generally apply for relief, but commonly to the general practitioner.

Lupus also formed less than 1 per cent. of all cases. Many of the other diseases were only a little more or less than 1 per cent., while some formed only a fraction of 1 per cent. of all.

CHAPTER IV

THE CARE OF THE SKIN IN HEALTH

THE skin has wonderful recuperative powers, and stands an amount of abuse which is often surprising. With its 2,000,000 or more sweat-glands and perhaps 500,000 oil glands opening on its surface, and with its constant exposure to irritating influences, it is only a wonder that it is not more easily affected by disease, and not strange that there are so many affections of the skin, *over one hundred and twenty-five*, far more than of any other organ of the body.

The skin is also continually shedding its outward surface, to be replaced by new cells formed from the soft succulent cells of its lower portion, which, in turn, are renewed from the papillæ below. This shedding of the epidermis in health is seen constantly in the warm bath, while in certain diseases it may be enormously exaggerated.

The epidermal layer of the skin is a marvelous provision, affording a constant and effective protection against adverse agencies. Thus, *vaccine*, or even *syphilitic* virus, could be smeared over the healthy skin and would not be effective until the skin was scratched; also the ever-present pus cocci exist on every skin, but do not act until they gain access through an abraded surface, as in scratching or in a follicle. When the epidermal surface is removed, as in moist *eczema*, they find ready entrance, and *impetiginous eczema* results.

Much error exists in regard to the care of the skin in health and disease. Fifty years ago the warm bath once a week was considered quite sufficient, and it is doubtful if our forefathers always indulged in it as often as this. In two large, separate gatherings Peary, who visited the

Arctic regions, and Shkelton, who explored the Antarctic regions, both said that while there they had not had a bath for seven months, and hardly took off their clothes during that period, and yet they were perfectly well. In the New York public clinics it is not infrequent to find Hungarian and other children who have their clothes sewed on them in the fall, not to be removed until spring, and often they appear to be in excellent health. It is a well-known observation of charity workers in New York City that among the poor it is not an infrequent sight to find the bath-tub used to hold the family supply of coal. To mention these facts may seem rank heresy in the light of modern custom, but long experience has taught me that bathing is frequently overdone. I realize fully the importance of cleanliness and asepsis in surgery, but for many years I have observed and remonstrated against the harm done to the skin by pernicious bathing. I am also sure that the injudicious use of the bath has often deranged the workings of the system at large. In many diseases of the skin wrong bathing habits often act prejudicially. The nurse, therefore, should seek and follow the instructions of the physician, and let him bear the responsibility. In my judgment the old-fashioned weekly warm bath is sufficient to keep the skin in good condition, although there may be reasons in special instances where more frequent bathing is desirable.

The cold morning bath seems to be desirable for some, who express the pleasure and refreshment of it. If a good reaction can be obtained after it, it may be conducive to the restoration and maintenance of health, But many cannot bear it, and there is danger of its being overdone, as I have seen the skin rough and dry when it was indulged in. It is to be remembered that all bathing removes the oily secretion of the sebaceous glands, whose secretion is intended to keep the surface soft and supple.

When the Turkish and Russian baths were introduced in this country it was claimed that they removed many ills by promoting the action of the skin. But it is question-

able as to how much real benefit they are, and in some instances they certainly are harmful. At the best, their rather violent effect can only be compared to purgation of the bowels, which, while necessary at times, is not desirable too often or as a habit. It is an error to believe that bathing of any kind will prevent skin diseases, and Hebra (one of the greatest dermatologists) pointed out some time ago that those who bathe the most have most trouble with the skin; we are all familiar with *eczema* of the hands, or "washerwoman's itch," where the excessive use of water and soap produce an intractable condition as long as these are persisted in.

In regard to the treatment of the skin of the face something may be said. There is no intrinsic reason why soap should not be used on the face, but, as a rule, I do not advise its daily use unless the face be really dirty. A good rub with cold water and the palms of the hands, as is common with men, suffices to keep the face in good condition, and is better than using a wash-cloth. Some advise warm water, but I find that those who have used it do better with cold, provided there is considerable friction and self-massage with the hands.

Powders are very largely used to cover defects of complexion, as also rouge, and personally I have not seen the harm from them that is sometimes charged. Comedones or blackheads are quite as common, or even more so, in young people who have never made a single application of such articles, as in those who have done so. There has been much talk in regard to "closing the pores" by this means, but everyone has seen coal heavers, with faces begrimed with coal-dust, who were sweating profusely through it. There is, of course, a difference in the substances sold as face powders; some of them are, perhaps, harmless, but by analysis some have been found to contain poisonous elements, as lead, mercury, and other ingredients detrimental to the skin. As a class, therefore, they should be avoided, however seductive the advertisement or however positive the assurance of druggist or

friend that they are "perfectly harmless." Patent and advertised remedies of all kinds are continually found to be useless and often harmful. The application I prefer is pure *rice-powder*, not that put up in packages, *poudre de riz*, but that bought in bulk from a reliable apothecary; calcined magnesia is also very serviceable.

The proper treatment of the scalp, both in health and disease, is a very important matter about which the nurse is often consulted. Much harm is often done by its injudicious management.

While a certain amount of combing and brushing is necessary, these are often overdone, and may result in loss of hair or undue irritation of the tissues of the scalp, leading up to disease. It is useless, and often harmful, to try to overcome dandruff by brushing, as it often only increases the trouble, which can certainly be checked by proper medical measures. I have never known of benefit from any of the advertised brushes of any kind which are often vaunted as beneficial or curative in troubles on the scalp.

Washing or shampooing the scalp is also another affair with which nurses may have much to do. This, likewise, is a process which may be beneficial or harmful both in health and disease, according to many circumstances. Too frequent shampooing, or even the daily wetting of the hair, as is the custom of many men, certainly leads to its fall, by drying up the secretion of the oil-glands, whose function it is to keep the hair in a good condition. In my experience the healthy scalp should not be washed oftener than once a month; when diseased in any way much harm may be done by washing, which should be practised only on the advice of the physician.

The best method of shampooing is by means of a certain potash soft-soap, *sapo viridis*, in solution of alcohol, 2 parts of the soap and 1 of alcohol. With a lady's hair let down, loose, and tied around with a string an inch or two from the scalp, to prevent its becoming tangled, the process is easily and quickly performed. The solution is taken

up with a long *hair dropper*, or medicine-dropper, which is run through the scalp in every direction, beginning from the top each time. As this is done the finger-tips are dipped in *very hot* water many times, and rubbed over the surface, following the dropper; this will give about equal parts of water and the solution. When the entire scalp is thoroughly white with the lather, which takes but a few minutes, the string is untied, and the long hair thrown over the head into the basin, and the hot water, which is then cool enough, is raised with the hands and the scalp thoroughly cleansed with it; as the water runs over the long hair this is sufficiently treated, without further manipulation. The same rinsing is then immediately done with a basin of *cold water* until all the soapy matter is thoroughly removed, and I never allow more than the two rinsings. The water is then squeezed from the scalp and hair, and all is dried with a number of *hot towels*.

For a lady's head I order six soft, old, fluffy hand towels, to be placed in an earthen pudding dish, and put in the oven fifteen minutes before the shampooing is begun, and guarded against burning. The washing process just described takes about fifteen minutes, the towels having then been in the oven half an hour. The dish with the towels on it is then placed inside a double winter blanket and carried to the room, and the towels used one by one, the others being kept covered and hot; all the six towels are employed, even if the hair seems dry. The first towel comes off very wet, and the fourth towel is generally pretty dry, but all six are necessary to complete the work. I have been told time and again that the whole process is finished in less than half an hour from beginning to end, and the result is such that one can go out at once without catching cold. Everyone describes the result of this method as most satisfactory, with the hair soft and fluffy. If there has been much tendency to dandruff, a little of a proper hair lotion should be immediately applied as soon as the hair is dry. It is impossible to cure the dandruff by shampooing alone. The same process is serviceable in

many diseases of the scalp, when so ordered by the physician.

In regard to the effect of soap on the skin something should be said. There are great differences in soaps and in their effects upon the skin. Mention has already been made of so-called *washerwoman's itch* or *eczema* of the hands from the excessive use of the yellow washing soap commonly used, but sometimes other soaps will prove irritating to certain skins. The requisites of good soaps are many: First, that they shall not contain too much alkali, only enough to saponify the fat. Second, that the fat from which they are made shall be good, pure, and sweet. For in the refuse sometimes employed there may be decomposed matter; and cases are on record where pus globules were actually found in soap which had caused and kept up a skin disease, and in one instance minute spiculæ of bone were found microscopically in soap which had produced an eruption on the face each time it was used for shaving. Third, good soap must be perfectly mixed and sufficiently boiled in order to produce the chemical process which is called saponification. Fourth, good soap should be free from extraneous substances as much as possible. Some of the cheaper soaps have clay and earth mixed with them to increase the bulk and reduce the cost; some are colored green, blue, red, etc., with materials often of questionable value, and are scented with strong perfumes of irritating character. The best soap manufacturers are now making soap largely of vegetable oils, and these, when properly used, are not harmful.

"Medicated soaps" are a delusion and a snare. The healthy skin cannot be improved by them, and diseased skin cannot possibly be restored to health by any combination used in the form of soap. Even sulphur soap can never cure the "itch," much less other skin diseases.

CHAPTER V

ERUPTIVE FEVERS OR EXANTHEMATA

NOT much need be said in regard to this class of skin affections, of which *measles*, *German measles*, *scarlatina*, *chicken-pox*, *small-pox*, *vaccinia*, and *erysipelas* are the chief, together with *syphilis*, as they are well treated of in other books accessible to nurses. But they all demonstrate well the fact that the skin may exhibit great changes from definite, internal causes, and that its diseases are not wholly or largely of a local nature.

1. **Rubeola** (*Morbilli*, *Measles*).—Measles is an acute, self-limited infectious disease, with febrile phenomena and symptoms of mucous irritation, with the appearance of a macular eruption of a mottled character, showing a considerable tendency to crescentic shapes. In from one to two weeks after exposure there occur languor, backache, running from the nose, sneezing, and coughing, with congested eyes. After about four days the eruption appears, first on the forehead, then upon the cheeks and neck, and so on down, until by the end of the third or fourth day it has covered the body and limbs, and is fading from the hands. By the end of about the fourth day of its completion, or eighth of its appearance, it has generally vanished, leaving a moderate scaling of branny character.

The nurse's part of treatment is to keep the patient from exposure to cold, which is liable to cause bronchitis, and to protect the eyes from much exposure to light. It is well, also, when the eruption has fully developed, to gently anoint the whole surface with a lubricating ointment once or twice a day, and about the best is one containing lanolin, which will be referred to later as *compound lanolin ointment*, or "skin food," which is useful in many diseased conditions of the skin (R. *Acidi carbolic*i, gr. v; *Lanolin*, 3ij; *Boroglycerini*, 3ij; *Unguent aquæ rosæ*, 3vj).

2. **Rubella** (*Rötheln*, *German Measles*).—This is an acute, slightly infectious disease, with red blotches, often very closely resembling measles, but less sharply and clearly defined, and not crescentic. It is more irregular in its course than measles, and has not the mucous or eye symptoms, and no great degree of fever. The incubation ranges from ten to twelve days. The rash more often resembles that of *scarlatina* than measles, and disappears in a few days.

3. **Scarlatina** (*Scarlet Fever*).—This far more serious infectious disease usually commences with more or less of a chill, often with vomiting and headache, sore throat, and general prostration. The period of incubation is not fixed, and may vary between two and twelve days. The eruption appears on the second day of the fever, first upon the face, and spreads rapidly down the chest, and reaches the lower extremities on or about the third day; shortly after this it is at its height, and by the fifth or sixth day begins to decline. By the ninth or tenth day desquamation, which is often profuse, is well established, and proceeds for a week or more. The rash has a peculiar scarlet color, and in the beginning is punctate, but when at all general it forms a more or less evenly diffused surface, hot and tense.

Nursing, directed by the physician, is a most important element in its treatment, and upon its faithfulness depends largely the safety of the patient, both at the time and subsequently. Free general inunction several times daily, as mentioned under Measles, begun about the third or fourth day of the eruption, modifies its course, gives comfort to the patient, and assists in minimizing the danger of infection.

4. **Varicella** (*Chicken-pox*).—This is a mild, infectious disease, characterized by an eruption of small, isolated vesicles, often very irregularly located, accompanied by very moderate constitutional disturbance. Incubation ranges between four and seventeen days, when there is a little fever and lassitude. Often the first sign of the

disease is the appearance of a few points, which are quickly converted into small, distinct vesicles, which are remarkably transparent, with but little surrounding inflammation. The vesicles generally appear first on the face, but frequently first on the back or chest. The small spots of inflammation are oval in shape, diagonally directed, and the clear vesicle soon dries into a scab. A peculiar feature of chicken-pox is the successive eruption of the vesicles, which appear in crops, often a hundred or so, new spots appearing each night for four or five days.



Fig. 7.—Chicken-pox.

There is usually a considerable amount of itching, and if scratched, the lesions leave scarring, which need not occur if they are not disturbed. It is mildly contagious, and has no relation to *small-pox*.

The nurse's main duty is to see to the comfort of the patient, and to prevent scratching, especially on the face, where disfiguring scars are often left. A mild, cooling calamine and zinc lotion, frequently applied, often aids greatly.

5. *Variola* (*Small-pox*).—This is a serious affection,

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which is happily rare of late years; it is very contagious to those not protected by vaccination. The period of incubation varies from six to twenty days. There is then languor and lassitude, with shivering, pains in the back, limbs and head, often with nausea and vomiting. After about two days small red points appear, first on the fore-



Fig. 8.—Small-pox.

head and about the mouth, then on the rest of the face; soon they extend down the trunk to the extremities, and the entire body may be more or less affected in one or two days. These little diffused points soon become conical and shotty, and by the next day a minute vesicular point appears. Within two days they become indented or

umbilicated, and then their contents become milky. By the sixth or seventh day pus appears in them, and they show signs of drying, quite apparent by the eighth day. The fever then lessens, but a secondary suppurative fever may occur, continuing several days, until many of the pustules burst or dry into crusts. The entire process of the formation and separation of the crusts may not be completed in three weeks or later.

Confluent small-pox merely represents a very severe eruption.

Modified small-pox, or *varioid*, is the same disease, whose severity is modified by influence of previous vaccination.

Hemorrhagic small-pox, falsely called *black measles*, is also the same disease, of unusual severity, with hemorrhagic features, generally fatal.

The nurse's duties can hardly be described here, they are numerous, but very special attention should be given to the care of the face, in using freely the applications which may be directed, in order to avoid, as far as possible, the unsightly scarring of the face, which is often so distressing.

6. *Vaccinia* is an acute, infectious, vesicular disease of the cow, which when communicated to man protects from small-pox. The little single lesion of *vaccination* by which it is produced artificially need not give trouble if it is protected immediately after vaccination by means of a wire shield, kept in place by adhesive strips, in addition to the tapes, which should be worn at least two weeks, or until the scab falls.

There are many erroneous popular ideas in regard to the conveyance of disease, *eczema*, *psoriasis*, etc., by vaccination. When the procedure is perfectly done, with good lymph, it can be only beneficial, and there are only three accidents of this kind which may occur, namely,

Erysipelas may sometimes develop around a vaccination insertion, and may spread and become a troublesome complication. But this is very rare, and is, of course, due

to specific erysipelas infection, and disappears in due time, leaving no constitutional results.

Furuncular inflammation may also accompany or follow vaccination, but this is likewise a separate, specific infection with pus cocci.

Syphilis has been known, in times far past, to be thus communicated, but in fifty years' experience I have never met with such a case, although I may see syphilis every day. With moderate caution and asepsis this possible danger can be absolutely eliminated.

The nurse's chief concern should be to prevent undue irritation of the vaccine lesion, and see to it that the wire shield is always in perfect position, so that the sore does not become inflamed, even by the friction of the edge of the shield, when it is misplaced or displaced. As is known, there is much objection to vaccination on the part even of intelligent persons, but the educated nurse should always be a valiant supporter of the practice, and exercise all influence to have it performed early in the child's life; this is a duty both to the patient and to the public.

7 Erysipelas (*St. Anthony's Fire*).—This may be defined as an infectious inflammation of the skin and subcutaneous tissue, most commonly of the face, characterized by shining redness, swelling, edema, heat, and a tendency in some cases to vesicles and bleb formations, and accompanied by more or less febrile disturbance. After one or two days of malaise, chilliness, nausea, etc., the eruption begins in one spot and quickly spreads, with a tolerably well-defined border, and may involve large surfaces. While it may be of relatively brief duration, it may last long, traveling from one point to another. *Erysipelas migrans*, sometimes wrongly called *chronic erysipelas*.

Pseudo-erysipelas refers to a reddened condition appearing on the face, creeping over the nose, which is not true erysipelas, but a lymphatic eruption, due to infection within the nose.

Erysipeloid is an erythematous eruption of the hands from some infection, but not true erysipelas.

8. **Syphilis**, or *lues*, as it is often called, is a very, very grave disease which cannot be adequately treated of here. It is placed here among the diseases induced by infection because it resembles those just mentioned in its nature and in many of its earlier lesions of the skin and mucous



Fig. 9.—Syphilis, early general eruption.

membrane; the later manifestations are looked upon as its sequelæ. It formed about 10 per cent. of the 30,000 cases.

Syphilis occurs only in one of two ways—by *inheritance* or by *contagion*—it is never developed *de novo*; when acquired there has always been a point of inoculation where the poison first entered and where there is found a *primary lesion* or *chancre*, although sometimes it is im-



Fig. 10.—Syphilis, ringed eruption.



Fig. 11.—Palmar eruption in syphilis.

possible to know certainly the mode or time of its acquisition. In a certain proportion of the cases (about 5 per cent.) the disease is acquired innocently (*syphilis in-sontium, innocent syphilis*) by accidental infection in many ways. Possibly 10 per cent. are *hereditary syphilis*, and perhaps 15 per cent. occur in marriage (*marital syphilis*), the rest by illicit intercourse.



Fig. 12.—Late tubercular syphilis.

There is a great deal of unnecessary and foolish fear in regard to the danger from ordinary syphilitic cases, especially in its later stages, for the disease is never acquired except through contact with active lesions, giving out a poisonous secretion, which can only enter a broken surface of the skin or mucous membrane. This secretion, as also the blood and tissues, contains a micro-organism, known as the *Spirochaeta pallida*, which is the

cause of the disease, however it may enter the system. But the disease cannot be acquired in any occult way by simply being with a syphilitic.

There are, however, certain lesions which are dangerous. The *primary sore*, or *chancre*, and *mucous patches*, whitish abrasions of mucous surfaces, give off a glairy secretion



Fig. 13.—Syphilis, chancre on chin.

which can produce infection when it enters an abraded surface. A *syphilitic* infant can readily communicate the disease, and any number of cases are on record where such a one has given a *chancre* on the breast to a wet nurse. The nurse having much to do with syphilitic patients would do well to wear rubber gloves, which should be carefully washed and sterilized.

CHAPTER VI

PARASITIC DISEASES OF THE SKIN

THESE are of two kinds—those caused by *vegetable parasites* and those caused by *animal parasites*. Of the former, there are three varieties, and of the latter, two, which need consideration here; although there are a number of insects which attack the skin (bedbugs, mosquitoes, bees, and others) and some which occasionally penetrate the skin, which need not be mentioned.

A. VEGETABLE PARASITIC DISEASES

1. **Tinea Trichophytina.**—*Ringworm* in its different varieties is caused by the growth in the epidermal layer



Fig. 14.—Scale from ringworm of the body. The faint outlines are the edges of the epidermal cells; the heavier jointed masses are the mycelium of the *Trichophyton tonsurans*. Greatly magnified.

of the skin and hair, and sometimes in the nails, of a micro-organism, the *Trichophyton tonsurans*. It is contagious and sometimes spreads dreadfully in schools and asylums, and may prove most intractable in the scalp of young persons. There is practically no danger to

nurses or attendants, for in nearly forty years no one in the New York Skin and Cancer Hospital has ever contracted it, to my knowledge. In very rare instances the attendant has, outside the hospital, infected the finger-nail by very careless manipulation of the scalp. The parasite may affect any portion of the body, and the appearances differ materially, so that they may be mentioned in order.



Fig. 15.—Body ringworm.

Tinea Trichophytina Corporis (Ringworm of the Body, Face, and Limbs).—The eruption develops from a small red spot, which enlarges rapidly, and in a week may be an inch or so in diameter, clearing somewhat in the center. The edge is sharply defined, red and scaly, the center of a dirty yellowish color. There may be many such lesions.

I have counted over one hundred on a child, and they may run together, forming gyrate figures.

Tinea Trichophytina Capitis (*Tinea* or *Herpes Tonsurans*, *Ringworm of the Scalp*).—This begins with a small spot, where the parasite has lodged, which very soon spreads, causing the hairs to break off, and leaving a grayish circular spot, covered with scales and stubs of broken hairs, suggesting a monk's tonsure, whence the name.

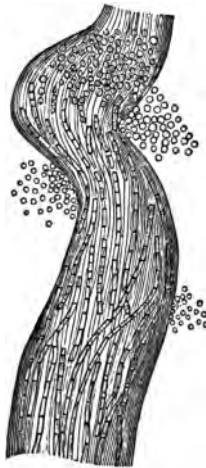


Fig. 16.—A hair from ringworm of the scalp. The shaft of the hair is penetrated with the mycelium, and adjoining are groups of spores of the *Trichophyton tonsurans*. Greatly magnified.

They are generally from $\frac{1}{2}$ to 1 inch in size when first discovered, and there may be one or several. In certain long-standing cases the distinctive characters of ringworm may be lost, and much of the scalp becomes scaly, with thin hair, among which broken and stubbed hairs may be found. Sometimes the parasite causes much inflammation, and boggy patches are seen, red and raised, to which the name *tinea kerion* is given.

Tinea Trichophytina Barbæ (Ringworm of the Beard, Parasitic Sycosis, Barbers' Itch).—On the bearded face the disease begins insidiously, much as in other regions, and clearly distinct rings are seldom seen. Sometimes deep inflammation results, as in *tinea kerion*, more often single follicles are affected, the parasite penetrating deeply. It is apt to be a very rebellious affair.

Tinea Trichophytina Cruris (Ringworm of the Thigh and Genital Region, Eczema Marginatum).—Here the growth of the parasite is favored by the warm, moist condition present, and soon forms a reddened surface, with sharply defined margin and clearing center, which distinguishes it from *eczema* in this region. The itching is generally most intense, and the cases often last long and are not cured until an accurate diagnosis is made.

Treatment.—Ringworm of the unbearded face, body, and groins is easily cured by proper local treatment, and the nurse has little to do but follow careful medical instructions. Ringworm of the scalp, however, may be a most intractable and troublesome affair, and nursing forms an important part in the cure, which requires the greatest amount of care and patience. Proper applications should be made with absolute regularity, night and morning or oftener, and in order to have them penetrate thoroughly into the hair-follicles it is well to use a stencil brush, with the bristles cut short, so as to secure good friction and penetration of the remedy; this also avoids the danger of infecting the nails if the fingers are used. The disease in this location should never be slighted, but treated carefully and continually, from its beginning until competent medical microscopic examination has pronounced the disease cured. The hairs in ringworm of the scalp break off very readily, and epilation, which was formerly a good part of the nurse's duty, is not much practised now, as it is almost impossible to extract the diseased root completely. The hair of the whole scalp should be clipped close.

2. *Tinea Favosa* (*Favus*, Crusted Ringworm).—This

disease, rare in this country, is caused by a different vegetable parasite, the *Achorion Schönleini*, and is quite distinct from ordinary ringworm. The characteristic lesion of favus is a slightly raised, circular, yellow, cup-like mass, depressed in the center, commonly seated around a hair. But actually this is rarely seen. More commonly there are yellowish, friable masses, resembling dried pus, which are composed of the luxurious growth of the parasite, and where the disease has lasted long there are bald, cicatrized areas, on which hairs can never grow; for the micro-organism penetrates very deeply, and can

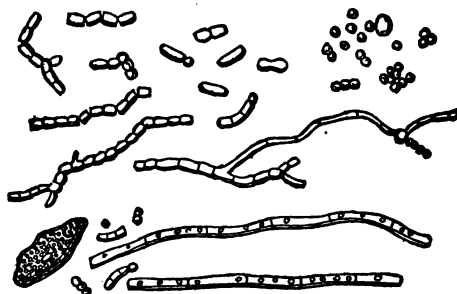


Fig. 17.—Spores and mycelium of the *Achorion Schönleini*, forming the crust in favus. Greatly magnified.

destroy the life of the hair. The hairs do not break off, and diligent epilation by the nurse often forms a great part of the treatment, with, of course, the faithful use of proper medical treatment. In one private case there were between 70,000 and 80,000 hairs extracted from a small patch before the disease yielded.

3. Tinea Versicolor (*Pityriasis Versicolor*, *Liver Spots?*).—This, again, is quite a different disease, due to a different vegetable parasite, the *Microsporon furfur*. It forms yellowish-brown, slightly scaly patches, of various sizes and extent, commonly first on the front of the chest;

sometimes there are very many small points, or it may cover large areas, and affect the back as well, occasionally appearing on the arms, but very rarely on the face. It is purely a local affair, caused by the growth of the parasite in the epidermal scales of the skin, and is easily and entirely

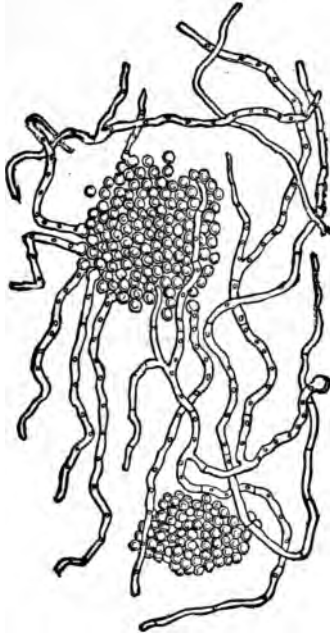


Fig. 18.—Spores and mycelium of the *Microsporon furfur*, causing tinea versicolor. Greatly magnified.

cured by purely external treatment. Though sometimes called "liver spots," it has nothing to do with internal conditions, and though caused by a vegetable parasite, it is very rarely conveyed from one person to another. The nurse has only to wash or rub the affected spots night and



Fig. 19.—Tinea versicolor.

morning with the proper lotion, commonly the hypsulphite of soda, a dram or two to the ounce of water.

B. ANIMAL PARASITIC DISEASES

There are a number of animal parasites which may attack the skin, but only two affections are of much frequency and importance; these are *scabies* and *phthiriasis*.

1. **Scabies** (*Itch*).—This is due to the boring into the skin, or rather beneath the epidermal layer, by the female *Acarus scabiei*, in order to lay her eggs in a little tract called the *cuniculus* or *furrow*. This forms a minute, brownish-black line, generally curved, and when seen is absolutely diagnostic; but this, in those who are cleanly, is often hard to find. There are generally only papules or

vesicles, which are very itchy, and when scratched there may be a very considerable amount of inflammation and crusting. The trouble generally begins on the hands, in the spaces between the fingers and on the wrists, and may affect the sides and soles of the feet, and also the region of the nipples, and the fold in front of the axilla. It never appears on the face or on the back, although there may be scratch-marks there from sympathetic scratching. The itching is generally pretty severe, but much less than in *eczema*, which it often much resembles.

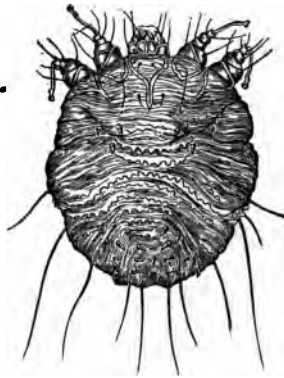


Fig. 20.—Female *Acarus scabiei*, seen from its back. Greatly magnified.

While the disease is contagious, there is really no danger to the nurse, whom I have never known to be infected, although often a whole family will contract it. It should be cured pretty quickly by active, proper local treatment alone, the nurse being very diligent in rubbing in the prescribed ointment over the affected parts, to reach the parasite in its burrow or cuniculus.

2. Phthiriasis (*Pediculosis*, *Lousiness*).—Three distinct varieties of pediculi may be found on the human skin, occupying the body, the head, and the pubis, and the conditions may be separately described. The insects

suck blood from the skin and cause much irritation and scratching, but never penetrate it, as in scabies.

Phthiriasis Corporis (Body Lice).—These are found principally about the shoulders and hips, and the eruption

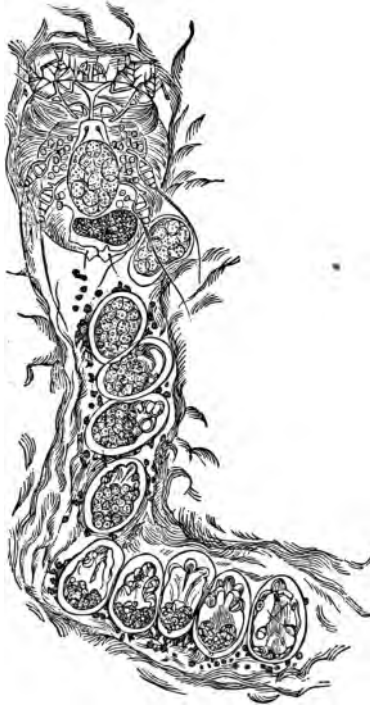


Fig. 21.—*Acarus* burrowing beneath the skin and depositing eggs behind her. Those nearest to her are imperfectly developed; those nearest the opening are almost hatched out. Taken from a section of the skin. Greatly magnified.

seen is the result of scratching; for the only mark the insect leaves is a minute red point which is really the end of a small plug of blood occupying a dilated follicle, into the bottom of which the parasite has penetrated to get blood.

The lesions, therefore, are mainly long scratch-marks, with perhaps some pustular inflammation, caused by the omnipresent pus cocci. The insects are seldom found on the skin, but a careful search will commonly discover them or their nits on the underclothes of the back.

Phthiriasis Capitis (Head Louse).—On the head attention is called by the itching and frequent scratched points, which may form crusts; in severe cases the hairs will be matted together with larger crusts and emit a foul odor, and the glands at the back of the neck may be enlarged, but never give trouble. The pediculi can then



Fig. 22.—*Pediculus corporis*. Body-louse. Greatly magnified.



Fig. 23.—*Pediculus capitis*. Louse of the head. Greatly magnified.

be seen moving upon the hairs, and their *nits* on the hairs, sometimes a number on a single hair. In cleanly subjects it may be difficult to discover them, and only a few *nits* are seen, mainly at the sides or back of the scalp. Unless every nit is destroyed some will hatch out, and the trouble be continued. Pediculosis capitis occurs in private practice almost entirely in females, and oftener than one would suspect, owing to trying on of head gear; sometimes it will persist in boarding schools, though often in a slight degree. The best treatment is to keep the head soaked for forty-eight hours in common kerosene oil, applied several times daily, with the head continually wrapped in a towel;

the volatile element of it kills the nits. A good shampoo, as already described, then may end the trouble.



Fig. 24.—Nits or eggs of the *Pediculus capitis*, or head louse, attached to hairs. Greatly magnified.

Phthiriazia Pubis.—This is caused by another species of pediculi, the *crab louse*, hence it is often called "*the crabs*."



Fig. 25.—*Pediculus pubis*. Crab louse. Greatly magnified.

The insect is much smaller than the others, and more round, and holds very tightly by means of its crab-like

claws, and is generally found firmly attached to a hair, with the body in close contact with the skin. It may thus readily escape recognition, and appears more like a little scab or crust than a living insect; its nits may be found, with care, as minute white specks attached to the hairs. The crab louse may also infest hairs of other parts, as the axillæ and beard, also the eyebrows and eyelashes. The true cause of itching about the pubis will sometimes pass long unrecognized. In some cases there will simply be a moderate itching about the genital region, with a few scratched papules; but in other instances all these parts may be greatly torn, and a considerable eruption exist. The trouble is generally easily removed with a mild mercurial ointment, well rubbed in for a few days, as prescribed by the physician. Sometimes this irritates and must be alternated with a calamine and zinc lotion.

CHAPTER VII

GLANDULAR DISEASES OF THE SKIN

THERE are two classes of glandular diseases of the skin: A, Those relating to the sebaceous or oil glands, and B, those affecting the sweat-glands.

A. DISEASES OF THE SEBACEOUS GLANDS

Three only need be mentioned here: 1, *Seborrhea*; 2, *comedo* (blackheads or worms), and 3, *acne*.

1. **Seborrhea.**—Three forms of functional disturbances of these glands are recognized: *Seborrhæa oleosa*, *Seborrhæa cerea*, and *Seborrhæa cornea*.

Seborrhæa Oleosa.—In this the skin is more oily than natural, and has a greasy, shiny appearance; it may exist to such an extent on the face that the oily secretion will even stand in drops upon the skin. The nose especially will be red and shiny. When the scalp is affected the hair presents an unctuous condition, and may emit a nauseous odor.

Seborrhæa Cerea.—This dry form of seborrhea presents greasy masses of scales and crusts of a yellowish or grayish-brown color, which adhere to the skin. At the sides of the nose it is very annoying; upon the scalp the secretion may either remain quite greasy, and accumulate, so that it can be removed as a yellowish, crusty mass, with the finger-nails, or it dries into scales which fall on the clothing, and forms a large share of what is commonly called *dandruff*, and causes loss of hair. *Dermatitis seborrhæica*, to be described later, has also a seborrheic element.

Seborrhæa cornea refers to certain hard rather horny concretions which form on the face of older people, which are found to have projections into the sebaceous glands;

sometimes their removal causes slight bleeding, and if unduly irritated may result in *epithelioma*.

The treatment of all these conditions is largely local, although they are more apt to occur in those with lowered vitality and poor circulation, and in those who have a tendency to *acne*.

2. **Comedo** (*Blackheads, Skin Worms*).—This represents a disordered secretion of the sebaceous or oil glands, principally on the face and back. In it there is a hardened condition of what should be oily matter. This hardened secretion is retained in the cavity, or distended duct of

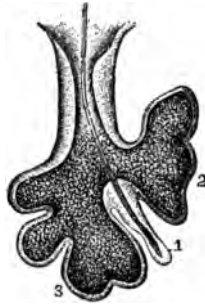


Fig. 26.—Sebaceous gland, distended with secretion, in comedo: 1, Minute hair in its follicle; 2, 3, lobes of the gland distended. Greatly magnified.

the sebaceous gland, and can be squeezed out as a small or large pear-shaped mass; the blackening of the outer end is largely due to dust from the atmosphere, but this cannot be removed by washing. The foundation for the popular idea that those plugs themselves are worms or insects lies in the fact that there is, in reality, an exceedingly minute animal which infests the sebaceous glands, by the name of *Demodex*, or *Steatozoön folliculorum*; but this is harmless and innocent of the disease; a number may be found in a single plug, or several masses may be examined without finding one. These comedo plugs can be removed with a watch-key or a tube comedo extractor;

but unless proper tonic and local treatments are persevered in the gland will fill again with disordered sebaceous secretion.

3. **Acne.**—This is due to inflammation of the sebaceous glands and surrounding tissue, and is commonly an obstinate affection, but certainly curable with proper



Fig. 27.—*Demodex folliculorum*. Very greatly magnified.

treatment, dietary and medical, internal and external. Personally I have never known of its permanent cure by any serum injections, but have seen dozens or even hundreds of cases where these have been tried in vain. Three forms of acne are commonly recognized.

1. *Acne simplex* (*acne vulgaris*, *acne juvenilis*) represents

the eruption so common on the faces of young people, in which there may be a few irregularly scattered papulopustules, generally associated with the black points of *comedones*; or there may be a very extensive and disfiguring eruption, covering much of the face, chest, and back. The eruption may vary very greatly at different times, owing to indiscretions in diet, exhaustion, and nervous strain; in girls it is commonly worse at the menstrual period, and may clear up greatly in the time between. It is apt to be especially bad in those with menstrual



Fig. 28.—Acne simplex.

disturbances, being then exhibited especially on the chin. While local treatment can effect a certain amount of good if diligently used, the disease can be cured only by the very strictest attention to diet and a profoundly tonic course of hygienic and medical treatment.

2. *Acne Indurata* (*Acne Tuberculata*, *Acne Cachecticorum*).—Here are larger, sluggish, indurated masses, from the size of a pea to that of a large chestnut; often they partake of the character of *dermic abscesses*, with fluctuation, and when punctured give forth a grumous pus,

sometimes fetid. This phase of acne often leaves very disagreeable scars.

3. *Acne Rosacea* (*Gutta Rosea*, *Rum Blossoms*).—While the preceding forms of acne belong to younger life, this is commonly seen in older periods. The characteristic location is about the central portion of the face. The surface is more or less evenly reddened, perhaps with some dilated blood-vessels (*telangiectasia*) and many or few sepa-



Fig. 29.—Acne indurata.

rate papules or pustules. There is heat and burning, with redness and flushing on the slightest excitation, or with heat. When there is mainly congestive redness, especially affecting the nose, the term *rosacea* alone is often used.

Acne atrophica, a rather rare disease, called also *acne varioliformis*, *lupoid acne*, and *acne necrotica*, exhibits small, red, flat papules, tending to suppuration, and crusting, which on disappearing leave scars like those of small-pox.

Adenoma sebaceum. also rare, presents small, indolent tumors, rounded or flattened, varying in color from yellow to red, and often covered with a network of dilated vessels.

B. DISEASES OF THE SWEAT-GLANDS

Disorder of the sudiparous glands may be manifested in several ways: A, As to quantity of secretion. B, As to quality of secretion. C, With retention of secretion. D, With inflammation.

A. The quantity of secretion may be increased (*hyperidrosis*) or diminished (*anidrosis*).

1. **Hyperidrosis** (*Excessive Sweating*).—This may be general, as in phthisis, or local. Local forms are often very annoying, especially in the axillæ, palms, and soles. On the soles there will often be tenderness with more or less burning, and walking or standing may be painful. The soles will be reddened or pink and have a soddened appearance. The true causes of excessive sweating are not determined, but there is little doubt but that it always indicates debility, generally nervous, and should receive careful medical treatment. Local measures are of some benefit, especially mild combinations with belladonna and salicylic acid.

2. **Anidrosis**.—Diminution or arrest of sweating is indicated by a dry, harsh condition of the skin (*xeroderma*) with more or less exfoliation. It is found in certain cachectic diseases, as nephritis and cancer, but also often in apparently healthy individuals. In addition to proper internal medication, the free use of what is known in the hospital as *compound lanolin ointment* or *skin food* (R. Acidi carbolici, gr. v; Lanolin, ʒij; Boroglycerin, ʒj; Unguent aquæ rosæ, ʒvj) is often of the greatest service; this should be thoroughly rubbed in by the nurse night and morning.

B. The secretion may be altered as to odor (*bromidrosis*) and its color (*chromidrosis*).

3. **Bromidrosis** (*Offensive Sweating*).—This may be

more or less general, the entire body emitting an offensive odor, or it may be confined to certain regions, especially the feet, axillæ, and genital regions. It is more or less dependent on general systemic conditions, often with habitual constipation, and is treated much as hyperidrosis. Dilute formalin preparations are of value locally.

4. **Chromidrosis** (*Colored Sweating*).—This curious state has been described by a number of observers; black, blue, green, yellow, and red sweat have all been recorded. In the axillæ what is called red sweat is not so very uncommon, caused by a bacterium on the hair. Little is known as to the cause of colored sweating; in some instances it has been thought to be artificially produced by various coloring agents, for the purpose of deception, by neurotic subjects.

C. The sweat secretion may be retained acutely (*sudamina*) or in a more or less chronic condition (*hydrocystoma*).

5. **Sudamina** (*Miliaria Crystallina*).—This represents an acute retention of sweat which is sometimes seen in connection with certain febrile affections. It appears as minute, rather flat non-inflammatory elevations of the epidermis, often quite abundant, with clear contents, as though minute drops of water, "dewdrops," had been sprinkled on the skin, principally on the abdomen. They may disappear quickly or slowly, without rupture, and leave a slight scaling. Little is known in regard to it, and it is of little significance and requires no special treatment.

6. **Hydrocystoma** (*Dysidrosis of the Face*).—This curious and rare affection is of quite a different character, and seems to be very largely confined to women, and to those exposed to heat and moisture over the fire and wash-tub. It consists of cysts in or about the duct of the sweat-glands, deep in the corium, and thus far has been observed largely, if not always, on the face. It is characterized by small globular elevations with clear, liquid contents which may appear in such numbers as to cause considerable disfigurement. The lesions are sluggish, generally non-inflammatory, and may remain for days or months. Little

is known in regard to the reason for its occurrence in some persons and not in others with similar occupation.

D. Two conditions are recognized accompanied by congestion and inflammation about the sweat-glands—*miliaria* and *hydro-adenitis*.

7. **Miliaria** (*Lichen Tropicus*, *Prickly Heat*).—This eruption is very common in hot weather, and may be very mild, or may cause considerable distress. It is characterized by the sudden development of minute red papules, with some vesicles, generally very thickly set, with some little general redness of the skin and more or less sweating on covered parts. It is caused by excessive heat, with some cutaneous irritation, as by flannel or harsh underwear, and in those overheated by injudicious eating and drinking. Sedative powders, with cooling diuretics and laxatives, generally give relief soon. Stearate of zinc is of distinct value, freely dusted on.

8. **Hydro-adenitis** (*Sweat Furuncle*).—Sometimes there will be inflammation about sweat-glands, most commonly in the axilla. At first they are deep seated and little painful, with normal skin over them, but soon they develop into boil-like lesions, which open and discharge pus, and may cause great pain. Little is known as to the cause, but it is presumed to be caused by deep infection of micro-organisms.

Hydro-adenoma, a rare, neoplastic disease of the sweat-glands, exhibits small, indolent, pearly or reddish nodules, from which a clear fluid can be expressed on puncture. It is closely allied to *epithelioma*, but is of a benign character.

CHAPTER VIII

NERVOUS DISEASES OF THE SKIN

SEVEN affections of the skin are classed as neurotic, because in them a nerve element largely predominates: these are *zoster*, *dermatitis herpetiformis*, *pruritus*, *dermatalgia*, *hyperesthesia cutis*, and *dystrophia cutis*. Other diseases also present nervous phenomena, but are more properly and definitely arranged in other classes.

1. **Zoster** (*Herpes Zoster*, *Zona*, *Shingles*).—This is an acute inflammatory eruption, with groups of flat vesicles upon an inflamed and very sensitive surface, corresponding to a definite nerve tract, accompanied by more or less neuralgic suffering. Much pain may precede the eruption, which is often supposed to be simple neuralgia. Counter-irritation, as by a mustard plaster, will often be applied to relieve this, and the characteristic eruption will soon appear, quite independent of the skin excitation, as it would appear without this irritation. Zoster is peculiarly a neurosis, as the eruption is found to be confined to the area of distribution of certain cutaneous nerves; and post-mortem examinations have demonstrated most conclusively acute disease of the nerves supplied to the part; the nerve trunk is found reddened and inflamed, and the posterior or sensory ganglion is congested, softened, and succulent.

The eruption of zoster is generally confined to one side of the body: on the chest (*zoster pectoralis*) or abdomen (*zoster abdominalis*) it reaches from the vertebræ to the middle-line anteriorly, often in broken patches. When the nerve inflammation is higher up, the band of lesion may extend down the arm (*zoster brachialis*), when still higher it will extend on the neck and head (*zoster collaris*), when

the gasserion ganglion is affected the eruption extends over the forehead and hair, often involving the eye (*zoster ophthalmicus*), and is sometimes regarded as erysipelas; when the nerve inflammation is very low the leg is affected (*zoster femoralis*).

The nurse may assist very greatly in the local treatment of the trouble by assiduous care in carrying out the necessary local measures. The main object of these should be the proper protection of the inflamed skin, and the avoiding of anything which can break the vesicles, which dry intact, as they will do in a week or so. For this purpose, when at all feasible (except on the head), the very greatest relief is afforded, also to the pain, by means of a muslin covering bound tightly over and around the affected surface and sewed on. The skin is first dusted thickly with a mild powder, starch serves excellently, and the inner surface of the band is also dusted, before applying; this prevents all friction from the clothing, and in dispensary patients I have had the same dressing left on, undisturbed, for a week, and when removed the eruption has largely dried up. Ointments or anything tending to soften the skin and break the vesicles should be avoided, for ulceration then readily occurs, leaving cicatrices, which are often the cause of prolonged pain; I have known the subsequent pain to last for months or years.

2. Dermatitis Herpetiformis (*Dermatitis Multiformis*, *Duhring's Disease*).—Here we have a chronic, inflammatory eruption, of nervous origin, exhibiting multiform lesions, with a marked tendency to grouping, and accompanied by itching, which is often intense. The eruption exhibits many different phases and conditions, and may at times present wheals, papules, vesicles, pustules, and even bullæ of some size, always with itching and the marks of scratching. It may affect any portion of the surface, and is very apt to be symmetrically developed, quite in contrast with zoster. The character and appearance may vary from time to time in the same person, for it is a very rebellious eruption. The lesions are apt to

leave pigment marks and superficial cicatrices, always more or less grouped. The proper application of lotions and



Fig. 30.—Dermatitis herpetiformis.

ointments by the nurse forms a considerable part of the treatment, although the real cure of the disease depends on skilful internal measures.

3. Pruritus.—Itching occurs both as a symptom of many diseases of the skin, and also as an independent affection, either confined to definite areas or affecting the entire surface. In this latter sense the term *pruritus* is employed to indicate a functional disturbance in the sensory nerves, exhibited alone as itching, without apparent changes in the skin, except those caused by scratching or by the means used to give relief. Several names are employed to designate pruritus, as it affects different localities.

Pruritus hiemalis represents an itching condition of the skin apt to occur in the winter, beginning in the autumn and increasing with the cold, and lasting until warm weather, often occasioning severe suffering and presenting numerous scratch-marks. The chief places affected are the extensor aspects of the arms, the inner surface of the thighs, and the calves of the legs.

Pruritus senilis is the name given to the tendency to itching in the senile skin, dependent in a measure on the atrophy of the skin occurring in elderly persons.

Pruritus Vulvæ.—This will cause the patient to rub and scratch the parts violently in efforts for relief, without seeming to reach the seat of the difficulty. On examination nothing may be seen but a chafed, dry surface, the result of rubbing or scratching.

Pruritus scroti and *pruritus ani* may also occur unconnected with other diseases, and give very great distress, but it is more commonly only a sign of a more or less slightly developed *eczema* which yields to appropriate treatment.

No single cause can be assigned for pruritus; it is a functional affection due frequently to other elements than those existing in the part itself. Pruritus of the vulva is often associated with uterine disease or with irritating vaginal secretions. Pruritus of the anus may arise from intestinal worms and, with pruritus of the scrotum, is often dependent upon oxaluria; sometimes it is due to coffee or tobacco. All forms of pruritus indicate some

systemic or nervous disturbance, and can seldom be overcome by local measures alone, but require very careful medical attention, to discover and remove the real cause of the trouble.

4. **Dermatalgia.**—This term is applied to actual pain in some area of the skin, without any visible or structural signs of disease; it is a rare condition, of which very little is known. The skin may be very sensitive to light pressure, but may be relieved by deep, firm pressure. *Causalgia* has been spoken of as another phase of this condition in which there is a burning sensation accompanied with pain in definite areas. Both these states are indicative of some other internal disorder.

Erythromelalgia is another term applied to a somewhat similar condition, affecting principally the extremities. In this there may be a burning, aching, and neuralgic pain, followed by redness and some swelling of the affected parts, as one or both of the hands or feet, or on one or several of the toes and fingers.

5. **Hyperæsthesia Cutis.**—Excessive sensibility of the skin is a condition seen in hysteric and nervous patients, and is also an accompaniment of certain diseases of the brain and spinal cord. The attacks may be mild or even agonizing; they have been compared to electric shocks, or as pricking, darting, and burning sensations. This condition, like the preceding, proceeds from deranged nervous action, due to some internal condition which it is often difficult to determine and remedy.

6. **Anæsthesia Cutis.**—Diminished or absent sensibility may occur in the skin, either generally or as a local manifestation. It commonly has connection with internal causes, as in *leprosy*, and not infrequently during the early, eruptive stage of *syphilis* there is an *analgesia*, or loss of sensibility to pain, so that a pin may be thrust through a fold of skin without causing pain. As a local manifestation it may occur as the result of injuries or diseases of certain nerves or nerve centers.

7. **Dystrophia Cutis** (*Atrophoderma, Trophic Changes in*

the Skin).—After injury or disease of certain nerve trunks trophic disturbances may occur in the skin. The most commonly known form is the erythematous state or *glossy skin*, seen after injuries of nerves, as observed frequently after gunshot wounds during the Civil War. In this a part, as one or more fingers, will become red, glossy, and shrunken at their ends, with an atrophic condition of the nails. In certain cases, when the nerve injury has been severe and prolonged, vesicles may develop and distinct gangrene of the skin has resulted.

CHAPTER IX

CONGESTIVE AND INFLAMMATORY DISEASES OF THE SKIN

THIS group includes a large number of the commoner affections of the skin, of which *eczema* is the most important. There are no less than twenty-five diseases included here, which are again grouped under nine classes: 1, Erythematous; 2, papular; 3, vesicular; 4, bullous; 5, pustular; 6, multiform; 7, squamous; 8, phlegmonous, and 9, ulcerative, which will be considered under these heads.

I. ERYTHEMATOUS ERUPTIONS OF THE SKIN

These include *roseola*, *erythema*, and *urticaria*.

1. **Roseola.**—This, the most superficial of contaneous affections, presents often only a transitory redness, and may appear as an independent disease, due to gastric or intestinal disturbances or may occur in connection with other well-defined diseases. Thus we hear of *roseola syphilitica*, *roseola cholericæ*, *roseola vaccinia*, *typhoid roseola*, etc., and of this nature also is the rash which in those with peculiar idiosyncrasies may follow the injection of certain antitoxins, and the administration of belladonna, quinin, copaiba, etc. The form of the roseola rash varies from the little pink lesions in *typhoid fever* to the larger blotches seen in early *syphilis*. They are simply local congestions of the skin, disappearing on slight pressure and returning quickly. There is little or no discomfort from their presence in most instances, but occasionally the rashes following certain drugs will be annoying, as will be mentioned later.

2. **Erythema.**—In this the congestion is deeper and more intense and persistent. Three forms are recognized:

Erythema simplex, *erythema multiforme*, and *erythema nodosum*. The term "erythematous" applied to other affections of the skin, as *eczema*, *lupus*, etc., does not indicate any connection with true erythema, but only the congested condition.

Erythema simplex presents a patch or patches of evenly reddened surface, an inch or more in diameter, of various shapes, a little raised, slightly hot to the touch, and disappearing momentarily on pressure. The condition is often a transitory affair, as in *blushing* on the face, neck or exposed chest or back, or it may remain long and recur repeatedly. The causes of such congestion of the skin are



Fig. 31.—Erythema multiforme.

many and varied, both external and internal: heat, cold, local irritants, and also nervous and reflex autotoxic congestion.

Erythema Multiforme (Polymorphous Erythema).—This often very puzzling eruption presents many phases or conditions, and while all authorities reckon it as primarily an erythema, the congestive process may be so severe that papules and raised rings are formed, and even vesicles and bullæ may develop. The erythematous patches, with which it usually begins, may be of various shapes and quite appreciably raised, hot to the touch, and attended with burning sensations and itching. The hands and fore-

arms are almost always severely affected, the eruption being commonly symmetric; the face also is frequently involved. The disease may be prolonged several weeks, with new lesions, each of which remains some time and is not evanescent as in *urticaria*. The disease is an *angio-neurosis*, commonly produced by autotoxins, and is not very uncommon in immigrants after the systemic derangements incident to confinement on shipboard, and requires careful medical treatment.

In making external applications, generally sedative lotions, such as the calamine and zinc, the nurse should sop them on freely with a bit of old linen handkerchief, and not with gauze or cotton, which retain the solid particles which should be deposited on the skin, by sopping or patting, and not with rubbing. It is often well to repeat the application in ten minutes to secure a good layer of the medicament.

Erythema Nodosum.—This is quite a different affection. It consists of rounded, more or less elevated, node-like blotches, which are reddish at first, but with a tendency soon to become darker colored and to fade to a yellowish hue as they disappear. They are more commonly developed on the anterior aspects of the lower limbs and backs of the forearms, and are accompanied with some burning pains and are tender on pressure. Unless injured they never suppurate, and the affection is usually a mild one, although it may be prolonged by successive crops of eruption.

Erythema induratum of Bazin, resembling the former trouble, is mainly seen on the lower legs, with purplish, indolent, node-like lesions, with a tendency to ulceration.

3. *Urticaria* (*Nettle-rash*, *Hives*).—This is characterized by the sudden appearance of flat, solid, slightly elevated blotches called *wheals*, which are irregular in size and shape, and are either reddish or paler than the normal skin. The eruption is always accompanied or preceded by irritation of a pricking, stinging, or burning character, often with itching and nervous irritation which is almost un-

bearable. The individual spots generally last but a short time, from a few hours to a day, and the eruption may be acute, and consist of one or two outbursts, or it may be chronic, with the continued and frequent repetition of the wheals. The spots may vanish as suddenly as they appear, or may subside slowly. Several forms are spoken of.

Acute Urticaria.—This generally arises from acute gastric disturbance, often from irritating ingesta, as stale fish, lobsters and crabs, raspberries, bananas, mushrooms, etc. Sometimes the congestive process in the skin goes so far as to produce exudation from the vessels, and blebs or bullæ may result (*urticaria bullosa*).

Chronic Urticaria.—This form is often developed insidiously; the patient may seem to enjoy good health, but is tormented with the repeated formation of wheals and irritation of the skin, which is generally greatest after meals. In those having this tendency there is often a general sensitiveness of the skin, so that the least irritation will produce white elevations bordered by pink; in this way a figure or name can be written on the skin with a blunt point, which will stand out and remain a considerable time (*dermatographia, urticaria factitia*). In certain cases the urticarial attack will come on periodically, and can be broken up by efficient doses of quinin, given before the expected paroxysm.

Urticaria Papulosa.—This is sometimes wrongly called *lichen urticatus* because of the lichenoid papules which are left after the subsidence of the wheals. It is most commonly seen in children, and often the only visible eruption will be scratched papules with a faint halo around them, and a history of urticarial wheals.

Urticaria Tuberosa.—Occasionally the swellings of urticaria assume some size, even almost half an egg, forming *giant urticaria*. When these swellings take place about the face, considerable deformity may be produced; sometimes the tongue is affected, and the patient may be almost choked (*angioneurotic edema*).

Urticaria Pigmentosa.—This curious and rare condition

may resemble that which is seen in *xanthelasma*, and has been called *xanthelasmaidea*. The earlier development is in wheals, like ordinary urticaria, which on subsiding leave yellowish, slightly elevated patches remaining a long time; it is mostly seen in young children, and may cause much suffering and prove rebellious.

II. PAPULAR ERUPTIONS

Two distinct eruptions are included here—*lichen* and *prurigo*.

4. **Lichen.**—Four varieties of this are recognized, with quite distinct characteristics.

Lichen Simplex.—In this the papules are pointed and hard, with a redness which disappears momentarily on pressure; they may be scattered or gathered together in groups, and generally affect the exterior surfaces of the limbs and body; it may readily be confounded with *papular eczema*. When grouped together the term *lichen circumscripta* has been used. *Lichen tropicus* has been already described as an affection of the sweat-glands. *Lichen urticatus* has just been mentioned as a form of *urticaria*. *Lichen pilaris* will be described later as *keratosis pilaris*.

Lichen Planus.—The papules in this are sharply defined, flat on top and often depressed in the center, of a purplish-pink color and shiny on the surface. They appear quickly and increase in size, and will often remain a considerable time, resisting treatment; they may run together forming patches of some size. They most commonly appear first on the wrists and backs of the hands.

Lichen ruber, as described by Hebra, is very rare in this country. The papules here are more acuminate, and tend to crowd together, and involve large areas. The disease is a serious and rebellious one, often endangering life.

Lichen Scrofulosorum.—This is, in reality, *lichen simplex*, occurring in strumous subjects. Here the papules are yellowish, more or less grouped, and usually covered with greasy scales; the skin is commonly inactive and dry;

it is rare in this country. *Syphilitic lichen* is also often spoken of, which is simply an early manifestation of the disease, papular in character. All lichen is a constitutional disease, not infectious.



Fig. 32.—Lichen planus.

5. Prurigo.—This must not be confounded with *pruritus*, already described. True prurigo is characterized by numerous solid papules deep in the skin, either of pale

red or the color of the skin, and attended with great itching; until torn by scratching they exhibit no inflammatory element, and are felt rather than seen; it is said always to begin in childhood, and is rare in this country. *Prurigo senilis* is often wrongly spoken of, referring to the *pruritus* seen in elderly persons.

III. VESICULAR ERUPTIONS

But two names appear here—*herpes* and *pompholyx*—because although vesicles are observed in several other diseases, in these alone they are a constant, pathognomonic sign.

6. **Herpes**, as here understood, is to be distinguished from *herpes zoster* or *shingles*, already described as a neurosis, because of the constant pathologic nerve change found in that disease. This is an acute inflammatory eruption whose characteristic lesion is a group of flattened vesicles seated on an inflamed and sensitive base. Four varieties are recognized.

Herpes Febrilis (*Herpes Facialis*, *Cold Sores*, *Fever Blisters*).—These well-known lesions are of little significance, but often very annoying, occurring about the mouth and lips and occasionally elsewhere on the face, and even sometimes as a rather generalized eruption. Little is known as to their true cause, but they often indicate stomach derangement, and may occur in the course of fevers. They commonly pass off spontaneously in a few days.

Herpes Iris.—This is a comparatively rare eruption, and is closely allied to *erythema multiforme*, already described, if, indeed, it is not a phase of it. The eruption is characterized by the occurrence of vesicles arrayed around a central one; sometimes several develop in succession and a series of concentric rings may be developed. These cases have also been called *herpes circinatus*, a term now applied to *tinea trichophytina*, or *ringworm*, a parasite disease, already described.

Herpes Progenitalis (*Herpes Preputialis*).—In this small

groups of vesicles form and rupture very quickly, so that there is usually presented only a raw surface, readily mistaken for venereal lesions. They occur in the genital region of both sexes; their course is short, and if uninjured they crust over and disappear in a few days, but are liable to reappear.

Herpes Gestationis.—This curious eruption, as the name implies, belongs to the pregnant state. During the later months of gestation, generally after the seventh, sometimes beginning in the fifth month, excessive itching begins upon the extremities, and is soon followed by grouped papules, which soon vesicate and may develop into bullæ of some size. The eruption is prolonged by successive crops, and lasts until delivery, when it disappears suddenly, or may be followed by an outburst three days or so after delivery.

7. *Pompholyx* (*Cheiopompholyx*, *Dysidrosis*).—We have already spoken of dysidrosis of the face as an affection of the sweat-glands; this peculiar, rather rare, mildly inflammatory eruption is a different affair, and affects principally the hands and feet. It consists of an eruption of deep-seated vesicles, probably of nervous origin, which sometimes coalesce and form lesions of some size; these are often seated along the sides and backs of the fingers, and on the palms, and also about the ankles, very symmetrically. The appearance of the vesicles and blebs is preceded by burning and tingling, and there is little inflammation attending the process, and but little tendency to form patches, like *eczema* in these regions; the lesions incline to dry up shortly, but the disease may be prolonged by the appearance of successive crops.

IV. BULLOUS ERUPTIONS

Two affections are thus classed—*pemphigus* and *hydra*.

8. *Pemphigus* is essentially an eruption of bullæ, and while in many cases they form a striking and almost startling feature, under certain conditions these become so altered as to be hardly recognizable. Two forms are recognized—*pemphigus vulgaris* and *pemphigus foliaceus*.

Pemphigus vulgaris may attack any or all portions of the body; different cases vary greatly in their severity or extent. The bullæ generally develop rapidly and often blisters of great size form in a day; the contents soon become purulent; there is but little inflammation at the base or around them. Some distinguish between an



Fig. 33.—Pemphigus

acute pemphigus and a *chronic pemphigus*, but the disease is essentially a chronic one, and may be fatal; cases which might be called acute pemphigus rather belong to the disease next to be described—*hydroa*. In certain cases there is a strong tendency to ulcerate, and each bleb may become the seat of a diphtheric appearing membrane, refusing to heal—*pemphigus vegetans*.

Pemphigus Foliaceus.—The appearance exhibited by this eruption, when of any duration, would hardly suggest the bullous character of the disease. The surface presents a more or less raw condition with numerous, partially attached, thin sheets of epidermis; these have resulted from ruptured bullæ or from such as have been imperfectly formed. The course of this eruption is most chronic and rebellious to treatment; the patient suffers greatly, and finally succumbs in a considerable proportion of cases. The term *pemphigus pruriginosus* has been applied to rare cases accompanied by itching; *pemphigus malignus*, *cachecticus*, and *gangrænosus* relate to severe cases and lowered vitality.

Epidermolysis Bullosa Hereditaria.—This term has been given to an exceedingly rare condition, in which pemphigus-like bullæ develop suddenly whenever the skin is bruised or pressed upon. It is generally developed first in infancy or early childhood, and resists all treatment attempted to check the tendency.

None of the forms of pemphigus are contagious, and the nurse need have no fear of infection, but they are trying cases to handle. The effort should be made to prevent too early a rupture of bullæ, as the epidermic covering of the bulla is the best protection to the raw surface beneath. But on the back or parts pressed upon these often form raw surfaces which are most distressing, as they adhere to the clothing or dressing, and the very freest use of large quantities of powdered starch or rice, with some stearate of zinc, often prove of great service, if the nurse uses them abundantly enough.

9. *Hydroa*.—This term was introduced before some more accurate definitions were established. It is employed mainly to represent a class of cases characterized by the occurrence of bullæ of various sizes, generally small, which can hardly be grouped with *herpes*, nor yet with pemphigus. There is room for doubt as to the propriety of making a separate affection by this name, as many of the cases thus reported appear to be related to *bullous*

urticaria, *dermatitis herpetiformis*, *erythema multiforme*, *herpes iris*, or *pemphigus*, already described.

V. PUSTULAR ERUPTIONS

Four distinct diseases are placed here whose characteristic lesion is a pustule; these are: *Sycosis*, *impetigo*, *impetigo contagiosa*, and *ecthyma*. These are all connected with the presence and effect of pus micro-organisms.



Fig. 34.—*Sycosis non-parasitica*.

10. **Sycosis** (*Sycosis Non-parasitica*; *Folliculitis Pilorum*; *Mentagra*; *True Sycosis*; *Non-parasitic Sycosis*).—This is an inflammation around and in the hair-follicles, principally of the hairy face, exhibiting pustules, penetrated each by a hair, and accompanied by pain and burning sensations. This disease must be carefully differentiated from *parasitic sycosis*, or “barber’s itch,” a form of ringworm, already described as *tinea trichophytina barbæ*. True sycosis begins with a stinging or burning pain, which is shortly followed by red points, quickly showing signs

of pus. The disease is not contagious and the nurse may be called upon to epilate. This should be done with a quick firm pull, and only those hairs showing distinct pustules around them should be removed, after which the proper remedy is to be immediately applied.

11. **Impetigo.**—In former times many cases of *pustular eczema* or *impetiginous eczema* were thus named, but cases do occur where there are separate, small, superficial pustules which tend to dry into yellow crusts, and if properly



Fig. 35.—Impetigo contagiosa.

treated heal kindly. This eruption is more frequently seen among the poor, especially among children, on the face and hands, but also on any portion of the body. Pustules are also seen in other diseases, as *scabies*, *sypilis*, etc.

12. **Impetigo Contagiosa.**—This is a mildly contagious eruption with superficial, flat vesico-pustules, which rapidly dry into yellow, friable, brown-paper-like crusts. They may be isolated or grouped together, and vary in size from a small split pea to that of a small finger-nail. Beneath

the scabs the surface is moist, and secretes a little pus, and heals without a scar. The most common locations are the face and hands, but any portion may be attacked, it usually spreading from above downward; children are most frequently attacked, and sometimes a number of cases occur in a community. It really is not contagious to a nurse or attendant, and readily yields to local treatment, which should be continuously applied, day and night, the ointment being gently rubbed in.

13. **Ecthyma.**—This is characterized by larger and deeper pustules than those of the preceding eruptions, seated upon a more inflamed base, leaving excoriations and temporary scars; ecthyma differs from a *boil* in not having a central core of necrosed tissue. The pustules may appear singly or scattered over much of the body; they are highly inflammatory and may cause much pain. Ecthymatous lesions appear in *syphilis*, *scabies*, and *phthiriasis*, but also occur apparently unconnected with any definite cause. Ecthyma occurs most commonly among the poor, and is often the result of neglect and filth, and is always a sign of lowered vitality, which affords the proper soil for the action of the pus micro-organisms. It is not at all contagious, in the ordinary sense, and the nurse need have no fear of infection in making the necessary local applications.

VI. MULTIFORM ERUPTIONS

While *syphilis*, *scabies*, *erythema multiforme*, and perhaps some other eruptions may be polymorphous or multiform, that is, showing several different forms of eruption, there are but two which are here recognized with this essential character, these are *dermatitis* and *eczema*. These two often resemble each other very closely; it is important that they should be differentiated. Simple *dermatitis* is a local inflammation entirely due either to local irritants or specific internal causes, as in the case of drug eruptions; while *eczema* is a constitutional affection in which it is often impossible to trace any local cause for the eruption.

14. **Dermatitis.**—This indicates simple inflammation of the skin from outside causes, either local irritants or substances taken into the system, as drugs, etc. The appearances may vary greatly, from the erythematous condition caused by heat or mustard to the large lesions, sometimes caused by iodides or bromides. Six varieties of *dermatitis* are recognized: *Dermatitis calorica*, *traumatica*, *venenata*, *medicamentosa*, *gangrænosa*, *factitia*.

Dermatitis Calorica.—The effects of heat and cold on the skin vary with the individual and with the degree of caloric. They exhibit various grades of intensity, from the milder sunburn and frosting to a bullous eruption, or even death of the part. *x-Ray dermatitis* belongs here, which, beginning as an erythematous condition, may extend deeply, causing an ulceration exceedingly difficult to heal.

Dermatitis Traumatica.—Mechanical injury to the skin produces various lesions, from the mild congestive state caused by friction of the clothing, to excoriations caused by scratching, or abrasions resulting from violence. The eruptions caused by lice and the itch mite are, in reality, *dermatitis*, but are described as *phthiriasis* and *scabies*. What is commonly known as *intertigo* is a local affair, due to irritation of the parts by confined and acrid secretions, with friction.

Dermatitis Venenata.—Various external irritants are capable of exciting inflammation of the skin, often to a very severe degree; such are: arnica, cantharides, croton oil, iodine, mercury, mezereum, mustard, tartar emetic, thapsia, and other substances used in medicine; also certain dye stuffs, notably those from aniline and arsenic; likewise certain plants, as *primrose* and especially the *rhus toxicodendron* or *poison ivy* or *oak*, and the *rhus venenata* or *poison sumac*. These artificial eruptions at times resemble *acute eczema* or *erysipelas* so closely that an immediate diagnosis may be very difficult. The eruption from poison ivy and sumac is papular or finely vesicular, accompanied with redness and burning, and the distress

from it may be very great. It is usually symmetric first, on both hands and arms, and the face is commonly affected, as also the male genitals; it is far more common in children, and especially in those of light complexion, and often in a group of children of the same or different families the dark ones will escape, while those of fair skin will be affected.

All these artificial eruptions tend to spontaneous recovery if the cause is removed, but in a certain number thus disposed *eczema* will result. In some cases the eruption from poison ivy or sumac will return very readily on each exposure, and instances occur where even riding by the plant when in flower will suffice to excite a fresh attack. The eruption is also sometimes seen even in winter, from dried plants which have been gathered with Christmas greens. The nurse's part in the treatment is to apply assiduously the proper remedy, generally in the form of a lotion, in quantity sufficient to affect the desired result. But some little knack is often necessary to accomplish this. Lotions with sediment should be thoroughly shaken, some poured out in a dish, which can be left covered to exclude dust, and the affected parts sopped freely with it with a bit of old linen handkerchief, never with absorbent cotton, gauze, or sponge; the surface should never be rubbed with it, but it should be only sopped or patted on.

Dermatitis Medicamentosa.—This term relates to eruptions sometimes produced on the skin by the internal use of certain drugs, and may assume vary grave proportions, such as the lesions caused by iodine and bromide of potassium. The drugs reported as having occasionally given rise to eruptions are as follows: Aconite, antipyrin, arsenic, belladonna, boric acid, bromine, cannabis indica, carbolic acid, chloral, condurango, copaiba, cubebs, digitalis, iodine, jaborandi, mercury, opium, phosphorus, podophyllin, quinine, salicylic acid, santonin, sodium benzoate, tar, turpentine, veronal, and others.

The eruptions caused by drugs vary greatly, from a

slight *erythema* to *papules*, *vesicles*, *bullæ*, and even *fungoid masses*, as occasionally seen from bromid and iodid of potassium. At times they resemble many diseases of the skin, and the diagnosis can only be determined by most careful analysis and exclusion of recognized eruptions. They usually subside more or less quickly when the exciting drug is abandoned, and with very little local treatment.

Dermatitis Gangrænosa (Sphaceloderma, Gangrene of the Skin).—Under certain circumstances this may occur in circumscribed patches; it may appear spontaneously or as the result of an injury; also from obstruction of the circulation, and may follow disease of the nerves, even in those far distant. The symmetric gangrene or *Raynaud's disease* belongs here.

Dermatitis Factitia (Feigned Eruption).—This is an artificial eruption produced by the patient for the purpose of deception, or, strange as it may seem, for reasons which it is often difficult to discover. These cases generally occur in hysteric women, and many such are on record, and I have seen a considerable number. The eruptions may vary considerably, sometimes abrasions of various degrees and often *bullæ* or blisters, produced by acids or irritating substances; they have been observed on various parts of the body. Their true nature can usually be detected by careful study, suspicion first arising from their failure to correspond with recognized types of disease.

15. **Eczema** (*Salt Rheum; Moist Tetter; Milk Crust*).—This is a great and important disease, forming nearly one-third of all cases in statistics, and probably one-half or two-thirds of all the cases of skin trouble which may come under the care of a nurse. Someone has called it the "keystone of dermatology," and one who learns its management well can accomplish more in diseases of the skin than in any other way. It attacks all classes and conditions, from the cradle to the grave, and appears about equally in both sexes; it has little or no tendency to self-limitation, and many cases last for years, with greater or less severity, until overcome by proper treatment.

Constitutional measures, including diet, hygiene, and correct medication, are essential for its cure and to overcome the tendency to recurrence of the eruption, although



Fig. 36.—General eczema.

right and proper local measures can often accomplish much in relieving or removing some of the local manifestations; and in this the nurse often play an important part, as well be mentioned later.

Eczema may be defined as a non-contagious, inflammatory disease of the skin, of constitutional origin, acute or chronic in character, manifesting any or all of the results of inflammation at once or in succession, and accompanied with burning and itching. As further details may be mentioned the tendency to exude a serous discharge which stiffens linen, and dries into scales and crusts, and in later stages produces an infiltration or thickening of the skin which then cracks, and causes painful fissures; its manifestations may be most varied.

The eruption may remain erythematous from first to last, or it may be papular; in some cases vesicles may be repeatedly formed, or the epidermis may be quickly stripped off, leaving a raw, red surface; or pustules may be freely developed, isolated and distinct, or a purulent and discharging surface may become covered with a crust; again, there may be thickened and reddened tissue, more or less covered with scales. These phases will be described later in connection with eczema in different locations. But it will be impossible to fully cover the subject in the present compass, which would require many pages. For a complete study of the disease the reader is referred to the work by the present writer on Eczema, with an analysis of 8000 cases of the disease, 368 pages, G. P. Putnam's Sons, New York.

There are six general symptoms of eczema which it is well to firmly fix in the mind; these are: 1, Itching, pricking or burning pain. 2, Redness from congestion. 3, Papules, vesicles, pustules, or exudation. 4, Crusting and scaling. 5, Infiltration or thickening of the skin. 6, Fissures or cracks.

1. *Itching*.—The most prominent and constant feature in eczema is the itching, which may be preceded by, or give place to, burning pain, always worse when the parts are exposed to the air and at night. In some locations, and in milder degree, the itching amounts to only a disagreeable tickling or pricking, as though a minute insect were moving beneath the skin; in other cases the itching

sensation is insupportable, and nothing will allay it but the most severe, deep, and thorough scratching.

2. *Redness from Congestion*.—This is the most essential element of the eruption, which disappears momentarily on pressure; there is almost always more or less elevation of temperature in the part affected.

3. *Papules, Vesicles, Pustules, or Exudation*.—Eczema being an inflammatory eruption of a catarrhal type, the exudation takes place in the upper portion of the corium and deeper layers of the *rete mucosum*. The papules and vesicles result from more intense congestion, and pustules arise from microscopic organisms or cocci. When the epidermis has been removed by the disease there is a "watering" or an oozing of serous fluid (*eczema madidans*).

4. *Crusting and Scaling*.—The exudate of moist eczema stiffens and stains linen and glues the hair together, and tends to dry into scales and crusts, as is seen in "milk crust" in infants. Some cases of so-called "*dandruff*" are the result of a mild, dry scaly eczema of the scalp.

5. *Infiltration or Thickening*.—When lasting long there occurs a thickening of the entire tissue of the skin, recognized by comparing a fold of diseased skin with a corresponding portion of unaffected tissue. On the lower legs the thickening will sometimes be very great, even simulating *elephantiasis arabum*.

6. *Fissures or Cracks*.—When the skin is in the latter condition, and is called upon to stretch or bend, as on the knuckles and palms, behind the ears, beneath the breasts, and elsewhere, painful *fissures*, *cracks*, or *rhagades* occur, which may be rebellious to treatment. Sometimes cracks on the ends of the fingers appear to be the only sign of eczematous disease. Some or all of these features, singly or combined, are found in every case of eczema.

Very many names have been given to the different phases of eczema, which are of no particular scientific or practical value, but a brief mention of some of them may be of interest. Thus, we often hear *acute eczema*, *subacute eczema*, and *chronic eczema* spoken of, which only signify

various degrees or states of the eruption; the disease is the same in every case.

Then a lot of names are used to indicate the character of the eruption.

Eczema erythematosum is marked from first to last by the erythema-like character of the lesion; there is always some infiltration, and the surface has a harsh, leathery feel, more or less scaly, with itching; on the face especially this is often wrongly called "*chronic erysipelas*."

Eczema Papulosum.—Here papules predominate, perhaps with other lesions; many cases which were formerly called *lichen* are now recognized as *papular eczema*.



Fig. 37.—Chronic papular eczema.

Eczema Vesiculosum.—Typical vesicular eczema is comparatively rare, and generally acute; more commonly the vesicles have broken down into moist surfaces or hard patches. On the hands they are not so rare, and large numbers may sometimes be seen on the fingers.

Eczema Pustulosum (*Eczema Impetiginodes*, *Impetiginous Eczema*).—Here pustules take the place of vesicles from inoculation with the omnipresent pus cocci; often they are distinct and separate, and often they coalesce, and we have simply an oozing surface, tending to form yellow crusts, as in eczema of the face, "*milk crust*" in infants, which, by the way, has nothing to do with milk.

Other terms are often used to indicate conditions which are secondary to the former; such as *eczema madidans*, or *eczema rubum*, *eczema squamosum*, *eczema sclerosum*, *eczema fissum* or *rimosum*, which have been already mentioned.

Eczema may attack any portion of the body, and sometimes the entire surface will be affected (*eczema universalis*). The appearances and treatment differ somewhat in dif-



Fig. 38.—Eczema of neck.

ferent locations, and brief mention of some of these may be of service; *infantile eczema* will be considered separately.

Eczema of the Face and Scalp.—These are common seats of the eruption, where it often proves very obstinate; the erythematous form already alluded to is quite common, when the skin will be red and thickened, with intense itching, sometimes exhibiting papules, with moist surfaces caused by scratchings. On the edges of the *eyelids* it

is often called *blepharitis*, and proves rebellious until proper constitutional treatment is instituted. On the *lips* it may affect the vermilion border alone, and on the upper lip is often connected with, if not dependent upon, an irritating discharge from the nose, persisting until that is rectified. About the *ears* it is troublesome to treat, and behind the ears cracks often persist aggravatingly. On the scalp it may be *pustular*, *moist* or *exuding*, and *dry* or *scaly*; the hairs are often stiffened as though with mucilage.



Fig. 39.—Acute eczema of ear.

Much of what is so often called scaly eczema of the scalp, with troublesome itching, is another affection, *dermatitis seborrhæica*, next to be described. The nurse's part in the treatment of these will be taken up later, with that of eczema in other regions.

Eczema of the hands and arms is also apt to be rebellious owing to their constant exposure to irritating influences, and the cracks and fissures are very painful unless properly handled. Vesicles are more likely to be seen here than anywhere else, both in acute and chronic eczema. Eczema of the *feet* and *legs* is often peculiarly obstinate owing to the dependent position tending to keep up the congestion

and hindering absorption. Eczema of the *anus* and *genital* region is intractable for obvious reasons, but most careful treatment, internal and external, can overcome it. Many cases called "*itching piles*" are of this nature. Some of the cases called eczema about the crotch are parasitic, *eczema marginatum*, a form of ringworm, as already mentioned under *Tinea*.



Fig. 40.—Eczema of palms.

Eczema of the trunk and *general eczema*, as a rule, indicates a very considerable lowered vitality, nervous or other, and local measures are often ineffective until active dietary and proper internal treatment are employed.

Infantile Eczema.—In children under five years of age the eruption of eczema is exhibited in its typical form, as far as the acute, raw, and exuding aspects are concerned, but vesicles are rarely if ever seen. Beginning commonly

on the face, with a small amount of papular or erythematous lesions, the eruption may remain there, or may rapidly extend until the entire scalp and face, also the arms, legs, and much of the body are affected. The surface of exposed parts is generally covered with crusts which are frequently torn off, leaving a bleeding and exuding corium, which again crusts over, or may remain moist. Covered parts become more dry, generally adhere to such dressings as are often employed, and when these are forcibly removed a



Fig. 41.—Infantile eczema.

reddened, moist, or papular surface is seen, which often bleeds. The itching of infantile eczema is often frightful, and the little sufferers become frantic in endeavors to get relief by rubbing and scratching.

The nurse's share in the treatment of eczema is frequently of the greatest importance; indeed, if even good local remedies are wrongly used they may be sadly ineffective, as I have repeatedly seen. As some of the direction which I give and demonstrate in lectures to the

nurses at the New York Skin and Cancer Hospital apply to other eruptions as well as eczema, it will be better to



Fig. 42.—Eczema in child.

defer their consideration until the final chapter on The Nurse and Diseases of the Skin.

VII. SQUAMOUS OR SCALY ERUPTIONS

Four diseases are thus grouped: *Dermatitis seborrhœica*, *dermatitis exfoliativa*, *pityriasis rosea*, and *psoriasis*. In these the scale, if not a primary lesion, is an inseparable part of the eruption.

16. **Dermatitis Seborrhœica** (*Eczema Seborrhœicum*, *Seborrheic Eczema*).—This is a chronic, slightly inflammatory affection of the skin, probably of microbic origin (but not actively contagious), exhibiting scales,

generally of a greasy character, either on a normally colored or moderately congested skin, with a tendency to extend (generally from the head downward) by sharply defined, more or less circular areas. It is frequently accompanied with considerable itching, which, however, is never so severe as in *eczema*.

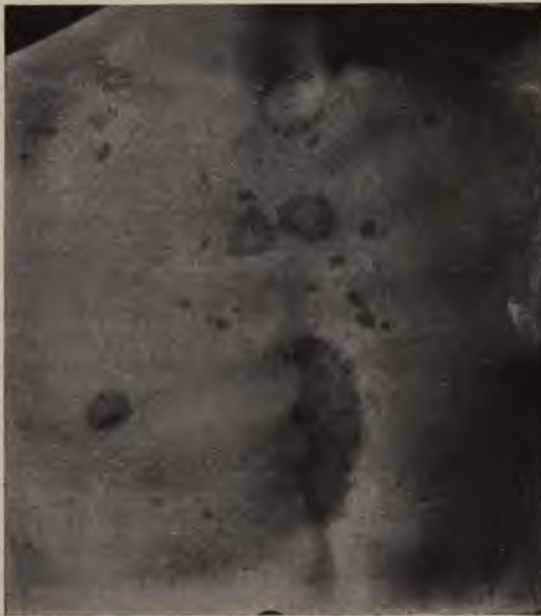


Fig. 43.—Dermatitis seborrhœica.

Upon the scalp (which is believed by some to be always the primary seat of the disease) the eruption appears in several forms. It may exhibit clearly defined, red, scaly patches often extending out from the hair line, or the surface may be more or less bathed in a greasy, adherent sebaceous coating; or the scaling may be more or less branny, giving rise to "*dandruff*" (*pityriasis capitis, seborrhœa sicca*). With this form the hair is lusterless and

falls, and it is a fertile cause of premature loss of hair. It affects also the nose and cheeks, eyebrows, mustache and beard, also ears and lips.

On the chest and back it occurs in the form of more or less circular, yellowish-pink, or reddened patches or rings, with some amount of greasy crusts, often suggesting ringworm or *psoriasis*. It is apt to return again when treatment is stopped too soon. The nurse's share in the treatment will be mentioned in the last chapter.

17. Dermatitis Exfoliativa (*Pityriasis Rubra*).—This is an inflammatory, non-contagious affection, of greater or less extent, continuously, or in patches, with a red, congestive color and often a great amount of branny scales. There is not the thickening of the skin as in *eczema*, and only moderate burning or itching. The diligent use, by the nurse, of proper lubricating ointment, such as the "skin food" already mentioned, is an important part of the treatment. This should be freely rubbed in, night and morning, with the palms of the hands, as there is no possible danger of contagion any more than there is in *eczema*.

18. Pityriasis Rosea (*Pityriasis Maculata et Circinata, Rose Spots*).—This is a superficial, non-contagious, mildly inflammatory eruption, of pale red, slightly scaly patches, hardly raised at all above the level of the skin; there may be some itching, but it often gives very little annoyance. The eruption appears almost always first about the shoulders and upper chest. The patches are usually discrete and separate, but may coalesce, and generally yield well to local treatment.

19. Psoriasis (*lepra vulgaris, dry or scaly tetter*) is a chronic, non-contagious eruption, occurring about equally in males and females, and generally beginning from seventeen to twenty years of age; although also appearing in younger persons and those of older years, but very rarely first developing after forty; it is very rebellious and may last very many years, having practically no tendency to permanent disappearance, although it may improve

temporarily with changing seasons. It is one of the common diseases of the skin, although forming a little over 3 per cent. over against the 30 per cent. of eczema.

The eruption begins as small red spots, which very soon become scaly, and during all its existence the pearly white scales are a predominating feature. The spots increase



Fig. 44.—Pityriasis rosea.

steadily in size, generally remaining circular, and the amount of the eruption may vary immensely in different cases; while some patients may for a long time have only a relatively few scattered lesions, in others there may be a great number, which may coalesce, covering much of the skin. It can attack all portions of the body, but selects by preference the exterior surfaces (while *eczema* affects



Fig. 45.—Psoriasis of arms.



Fig. 46.—Psoriasis of legs.

the flexor surfaces), and will generally be found on the elbows or the knees and front of the lower limbs. It is

apt to be symmetrically developed. The scalp and forehead are also favorite seats of psoriasis.



Fig. 47.—General psoriasis.

Various names have been given to the different appearances of the eruption, which are really of no significance,

as the disease is one and the same in every instance. Thus, when it first appears as a small red spot, it may be called *psoriasis punctata*; as this enlarges and becomes scaly it is thought to resemble mortar sprinkled on, and is called *psoriasis guttata*. When a little larger the spots are



Fig. 48.—Psoriasis of body.

likened to a coin (*psoriasis nummularis*); when they clear in the center, *psoriasis orbicularis* or *circinata*; if the scales are much heaped up and crusted the term *psoriasis rupiodes* has been used. Sometimes these rings coalesce and produce gyrate forms, *psoriasis gyrata*; when large surfaces are involved the name *psoriasis diffusa* or *ag-*

gregata has been used, and *psoriasis inveterata* is applied to express obstinacy. There is generally very little itching in psoriasis, though at times it may be troublesome.

Psoriasis is not at all contagious, and the nurse need not fear making thoroughly any external applications that may be ordered, but the eruption can never be cured by local remedies alone, though they can aid in removing the lesions; the disease is constitutional and requires prolonged vegetarian and medicinal treatment, and if all is done rightly a certain proportion of cases can be cured.

VIII. PHLEGMONOUS ERUPTIONS

This group is characterized by localized inflammatory action, and the process is deeper than in the eruptions classed as pustular, as it often results in destruction of tissue and the discharge of a slough of necrosed or dead substance. Four affections are placed here: *Furunculus*, *carbunculus*, *abscesses*, and *hordeolum*.

20. **Furunculus.**—Boils or furuncles consist of circumscribed points of inflammation of the corium, or deep skin and connective tissue, attended with much pain, and terminating in suppuration and the formation of a central slough or core; when this escapes the little abscess tends to heal. Boils seldom come alone, often in crops, and frequently one will succeed another for a considerable period; the condition or state exhibiting furuncles is known as *furunculosis*, which often persists a long time, until overcome by proper constitutional treatment; although the exciting cause of the lesions is the entrance of the omnipresent pus cocci, their activity depends upon a special condition of the system to furnish a correct soil for their growth. The nurse can do much to aid in the treatment of boils, as will be mentioned in the last chapter.

21. **Carbunculus** (*Anthrax Simplex*, *Carbuncle*).—This is of the same nature as a furuncle, but affecting a much larger area, and may be a serious affair. It is an inflam-

mation of the deeper structures, attended with deep, boring pain, exhibiting dusky redness and brawny hardness, with the subsequent production of numerous sieve-like openings through the skin, discharging pus; later the entire center sloughs out to a varying extent, leaving a granulating surface which heals with a scar. The most common location is the back of the neck, but they may also occur on any portion of the body. They are more commonly treated surgically, by incision or excision, but I have not used poultices or practised incision for boils or carbuncles



Fig. 49.—Carbuncle.

for thirty or more years, and with proper nursing and medical treatment dozens of patients have expressed the greatest satisfaction, as compared with former experiences with other measures. The local treatment will be detailed in the last chapter.

22. **Abscesses.**—Cutaneous abscesses are often seen on the face in connection with *indurated acne*, also on the scalp of infants, especially in hot weather, and in connection with *eczema*. In the axillæ they often appear connected with the sweat-glands, as already mentioned under *Hydro-adenitis*.

23. **Hordeolum** (*Stys*).—These are closely related to boils, being pus infections of the *meibomian glands* of the eyelids, and are familiar to all.

IX. ULCERATIVE ERUPTIONS

Ulcers are very generally secondary lesions, the result of some previous pathologic process, as in the case of epithelioma, and those connected with *syphilis*, *lupus*, etc.; most of them, therefore, are more properly classified and considered in connection with the diseases to which they belong. There are, however, two forms of cutaneous ulceration to be here considered: *Simple ulcer* and *ulcerative onychia*.

24. **Ulcus**.—Varicose ulcers of the lower leg best typify this lesion of the skin; these occur mainly in those who stand much, and are due primarily to distention of the veins and loss of tone in the skin. Beginning often with a ruptured vein, they may, if poorly treated, become a large, very painful ulceration, with hard, brawny, everted edges, exceedingly difficult to heal; many patients will suffer greatly from such for years. But the skilful use of the solid rubber bandage by the nurse, as to be mentioned in the last chapter, not only gives very great relief, but cures the trouble. Ulcers may form on any portion of the body from injury or various causes, and as *bed-sores* give much trouble.

25. **Ulcerative Onychia**.—Inflammation and sometimes ulceration around the nails may sometimes be very distressing, and lead to permanent loss of the nail. *Peri-onychia*, *whitlow*, or “*run-around*” is generally a mild but painful and rather superficial inflammation due to pus infection, which may, though rarely, give rise to an ulcerative process.

CHAPTER X

HEMORRHAGES, HYPERTROPHIES, AND ATROPHIES OF THE SKIN

THESE three groups have no relation to or connection with each other, but are placed together for convenience.

A. HEMORRHAGES IN THE SKIN

Three affections are grouped here: *Purpura*, *scorbutus*, and *hematidrosis*.

1. **Purpura** (*Land Scurvy, Purples*).—Three varieties of this disease are recognized: *Purpura simplex*, *purpura*



Fig. 50.—Purpura.

rheumatica, and *purpura hæmorrhagica*; all exhibit hemorrhagic patches of various sizes and shapes, slightly raised or level with the skin, which do not disappear on pressure;

appearing first of an almost arterial red, they quickly deepen in color, until before they have entirely disappeared have passed through various changes, from purple to greenish brown, and yellow.

Purpura simplex is commonly seen first on the lower limbs, and also upon the forearms; the eruption usually develops symmetrically, and is prolonged by successive crops. The spots are often small, almost punctuate, but may be $\frac{1}{2}$ inch or more in diameter, and generally rounded. There are few constitutional symptoms except languor.

Purpura Rheumatica (Peliosis Rheumatica).—This resembles *erythema multiforme* almost more than purpura, but the lesions are hemorrhagic as well as congested, and do not wholly disappear on pressure; they are generally small, are apt to be slightly raised, so as to be detected by touch, they often appear first about the knees and are accompanied by pains in the large joints.

Purpura Hæmorrhagica (Morbus Maculosus, Werlhoff's Disease).—This is a severe affection exhibiting hemorrhages from various mucous surfaces as well as in the skin. There is prostration and the sudden appearance of hemorrhagic spots of varying size, often large and purplish, not disappearing on pressure.

2. **Scorbutus (Scurvy)**.—This is a constitutional state of exhaustion, during which hemorrhagic and bruise-like ecchymoses occur upon the skin, generally of some size, together with a spongy state of the gums, and subsequent loosening of the teeth. It is due to a deficiency of fresh vegetables in the dietary, and was formerly, in the days of sailing ships, very much more frequent than now, owing to the diet of salted meat and hard tack. There is a leaden color to the skin, malaise, rheumatic pains, and edema; if unchecked it is fatal.

3. **Hematidrosis (Ephidrosis Cruenta, Bloody Sweat)**.—This very rare condition is characterized by the escape of blood through the sweat-glands; the fluid that exudes may be very watery. It is most frequently seen in hysteric girls with faulty menstruation.

B. HYPERTROPHIC DISEASES OF THE SKIN

Five classes are represented here, as they affect the different elements of the skin.

I. HYPERTROPHIES OF PIGMENT

Five distinct states are found here: *Lentigo*, *melanoderma*, *chloasma*, *morbus Addisonii*, and *naevus pigmentosus*.

1. **Lentigo** (*Freckles*).—This well-known deformity consists of deposits of pigment of small size, of a yellowish or brownish color, scattered mainly over exposed portions of the skin. They are most common in those with light complexion, especially persons with red hair. They may affect other regions than those exposed to direct sunlight. The pigment is deposited in the deep layers of the epidermis, where it is located in negroes, and consequently it is extremely difficult to reach the trouble. Most if not all of the advertised nostrums are a delusion and a snare.

2. **Melanoderma**.—This term is used to designate various brownish discolorations of the skin, which may occur from different causes, some local, others constitutional.

Ephelis (*Sunburn*, *Tan*).—This relates to the well-known effects of the sun, producing a general darkening of the skin.

Irritating agents, as blisters, often leave behind them a general darkening of the integument. Pigmentary deposits may follow long-continued cutaneous congestion and inflammation, as in *eczema* and *ulceration* of the lower legs, also after *syphilitic lesions*, and old cases of *phthiriasis*. Staining of the skin may at times follow long-continued taking of arsenic; and the prolonged internal use of nitrate of silver produces a peculiar leaden or bluish color to which is given the name of *argyria*.

3. **Chloasma** (*Liver Spots*, *Moth*).—This consists of yellowish-brown pigmentary discolorations of various sizes and shapes, chiefly about the face and neck; it is most commonly seen in females, but occurs also rarely in males. The surface is smooth and not scaly unless ir-

ritated, and the margins of the patches are quite sharply defined; the forehead, temples, and cheeks are common localities, also about the mouth. The cause in females is frequently uterine or ovarian disease (*chloasma uterinum*), though it is quite probable that liver disturbance is also an important element.

4. Morbus Addisonii (*Bronzed Skin Disease, Suprarenal Melasma*).—This, often the first sign of *Addison's disease* of the suprarenal capsules, is a peculiar bronzing of the skin, of a dingy or smoky appearance, or various tints and shades of deep amber or chestnut brown, most strongly manifested on the face, neck, superior extremities, penis and scrotum, and in the flexures of the axillæ and around the navel.

5. Nævus Pigmentosus (*Pigmentary Moles*).—This consists of a pigmentary deposit, with some fibrous tissue, forming distinct, isolated lesions of varying size and shape, often of congenital origin, but also developing at any period; generally there are several of these deformities, which may be very small, and are not uncommon on the face. When hair grows in their structures it takes the name of *nævus pilosus*, to be described later.

II. HYPERTROPHIES OF EPIDERMIS AND PAPILLÆ

Six conditions of disease are recognized as belonging to this group: *Ichthyosis*, *keratosis pilaris*, *tylosis*, *cornea cutaneum*, *clavus*, and *verruca*.

1. Ichthyosis (*Fish-skin Disease*).—In this there is a dry, harsh, and scaly condition of the skin, of greater or less extent, and in marked cases the epidermis may form polygonal plates, like the scales of a fish. Often ichthyosis is congenital, seen at birth (*harlequin fetus*), the disease increasing during childhood. The eruption is most developed on the extensor surfaces of the body, knees, and elbows, the flexors being spared. Milder cases have the name of *xeroderma*. These patients seldom perspire, and sometimes there are painful cracks. Two degrees or forms of ichthyosis are described.

Ichthyosis simplex represents the milder degree, largely epidermal; the scales are not thick, but may be strikingly regular in form.

Ichthyosis Hystrix.—Here there is a great hypertrophy of papillæ, with heaped-up masses of epidermal tissue; this may occur over a considerable extent, or may appear localized in patches, sometimes following nerve tracts (*neuropathic papilloma*). Different cases present very different grades of the disease, from a few groups of brownish- or grayish-yellow wart-like excrescences to large areas of almost horny productions (*porcupine men*). While ichthyosis is well-nigh incurable, much may be done by assiduous nursing, rubbing in morning and night of large quantities of a suitable ointment, such as the *skin food*, already mentioned, with alkaline baths, and proper internal measures.

2. **Keratosis Pilaris** (*Lichen Pilaris*, *Pityriasis Pilaris*).—In this there are minute, pointed, epidermal elevations about the orifices of the hair-follicles. These are seen most often on the backs of the upper arms, also on the thighs and on the backs of the hands and fingers.

A rare affection, called *keratosis follicularis*, *psorospermiosis*, or *Darier's disease*, resembles this, but in a much more severe form. Beginning from above downward, much or all the skin may be involved in a papular eruption, characterized by horny proliferation of the sebaceous and hair-follicles. The treatment of these conditions is much as has been described above under *Ichthyosis*.

3. **Tylosis** (*Tyloma*, *Callositas*, *Callus*, *Callosity*).—This consists of an abnormal deposit of epidermal cells, forming yellowish or grayish masses of varying form and thickness, especially on parts exposed to pressure or friction. This is really an augmentation of the condition found normally on the palms and soles, where it may be so great as to give trouble by painful cracks; sometimes the palms or soles may be greatly thickened without any recognized cause. The callus formed here and there as the result of some occupations belongs to this category.

4. **Cornu Cutaneum** (*Cornu Humanum, Cutaneous Horn, Horny Excrescence*).—Cutaneous horns represent very closely the horns of animals in structure; they are usually small, but have been observed 6 inches in length; they are rather abruptly conical, and are seen mostly about the hands and face.

5. **Clavus**.—A corn is a small, rounded mass of hypertrophied epidermis, projecting slightly from the surface; its base is conical, reaching down even to the true skin, and causing much pain when pressed upon. Two varieties of corns are spoken of: the *hard corn*, when seated on an exposed surface, and the *soft corn*, located between the toes, where the parts are kept moist. Both are essentially the same, and caused by wrongly fitting coverings of the feet.

Corns can generally be avoided and often cured by wearing many different pairs of shoes on different days, even five or six pairs, each on successive days, with absolute regularity. In this way pressure on particular parts is changed, and any remedial measures employed have a better chance for action.

6. **Verruca**.—A wart represents a circumscribed papillary hypertrophy, with more or less epidermal accumulation; it may vary greatly in size and shape, and may be single or large numbers may exist. While seen most frequently on the hands, they are met with elsewhere on the body. Four varieties are recognized: *Verruca vulgaris, senilis, digitata et filiformis*, and *acuminata*.

Verruca Vulgaris.—Common warts need little description, as they are familiar to all. They are epidermal growths reaching down between the papillæ, which are elongated, and bleed when the wart is pared too closely; the so-called “seeds” of warts are those epidermic projections from which the wart is reproduced. Nothing is known as to the real cause of warts, which sometimes disappear spontaneously.

Verruca Senilis.—This refers to the multiple, flat, dark yellow or brown, slightly horny elevations seen repeatedly

about the face, shoulders, hands, and arms of elderly persons.

Verruca Digitata et Filiformis.—In this variety, seen mainly on the scalp, face, and neck, the growth is soft and long, often composed of several finger-like projections.

Verruca Acuminata (*Venereal Wart or Vegetation*).—These are also known as *pointed condyloma*, to distinguish them from the *broad or flat condyloma* of *syphilis*, which latter is, in reality, a *mucous patch* greatly enlarged. Venereal warts occur commonly about the genital and anal regions, and exhibit clusters of papillary growths, generally pointed on the extremity, red and succulent, and often bathed in a purulent secretion; they sometimes attain great size. They are not, strictly speaking, venereal and may occur entirely distinct from venereal cause.

C. HYPERTROPHIES OF CONNECTIVE TISSUE

Five names appear in this division: *Scleroderma*, *morphea*, *sclerema neonatorum*, *elephantiasis Arabum*, and *dermatolysis*.

1. **Scleroderma** (*Sclerema*, *Dermatosclerosis*, *Hide-bound Skin*).—This rare affection (but 30 cases among 30,000) is characterized by a hard sole-leather-like condition of the skin, of greater or less extent, which may cause great discomfort by its rigid, tense, and immovable state. The tissue is of a brownish-yellow, waxy look, and is so stiff, hard, and board-like that it cannot be pinched up. In some instances the disease is limited in extent, as in a band on the face, or following a nerve tract along the face or body, or again, it may be more general, involving an entire limb or the trunk, and in the latter instance causing great distress by interfering with breathing. It is always a very intractable affair, but the nurse can always help materially by frequent application of proper ointments with faithful massage.

2. **Morphea** (*Circumscribed Scleroderma*).—The features of the diseased skin in morphea resemble those of *scleroderma*, in the hard, lardaceous character of the affected

portions; impossible to pinch up and of a dirty yellowish color. But it differs from that disease in the limited extent and commonly roundish, well-defined shape of the multiple patches, which are surrounded by a pinkish congestive border or halo. It seems to be more common in females, 20 to 4 males, in 30,000 cases. The functions of the nurse are much the same as in scleroderma.

3. **Sclerema Neonatorum.**—This very rare affection occurs soon after birth, and is generally fatal. It commences with an edematous infiltration, the skin being hard, tense, and of a yellowish, brownish, or even a livid purple hue.

4. **Elephantiasis** (*Pachyderma*, *Bucnemia Tropica*, *Barbadoes Leg*, *Elephant Leg*).—This has no relation to *elephantiasis Græcorum*, to be described as *lepra* or *leprosy*. There is a hypertrophic thickening of the skin and subcutaneous tissue, with some edema and papillary hypertrophy. The most common seat is in one lower extremity, rarely both. Beginning with repeated attacks of cutaneous inflammation, like erysipelas, of greater or less severity, the leg and foot increase in size, become quite hard, and more or less pigmented, until they may be enormous. Certain cases of *eczema* of the feet and legs, when of long standing, may exhibit such a thickening and papillary hypertrophy as to resemble a true elephantiasis. The solid rubber bandage, as will be described in the last chapter, when rightly applied, affords the best results upon these legs.

5. **Dermatolysis.**—This consists of a hypertrophy of the connective-tissue elements of any portion of the skin, so that it hangs in folds, and may occur on any part of the body. This may be so slight as to cause little annoyance, or may increase to enormous proportions and present very curious aspects.

D. HYPERTROPHIES OF THE HAIR

Two conditions are found here—*hirsuties* and *nævus pilosus*.

1. **Hirsuties** (*Hypertrichosis, Trichauxis, Augmented Hairy Growth, Superfluous Hairs*).—The amount of hairy growth varies greatly in different persons, and instances are on exhibition where even the entire surface is covered with thick hairs, as also many *bearded women*. Medically the condition is of special importance when it affects the face or arms of females, either as few or many stiff, dark



Fig. 51.—Nævus pilosus.

hairs or as a fine downy covering. The advertised "depilatories" are a delusion and a snare, as they only soften and remove the outer portions, as does shaving, without attacking the hair papillæ at its root, as shown in the chapter on Anatomy, from which the hair regrows with even more vigor; only when the hair papilla has been destroyed or becomes inactive will the hair cease to grow. This

papilla can be reached only by *electrolysis*, which when properly employed certainly eradicates the trouble; but if there is an extensive growth of hair this process is often tedious in the extreme.

2. Nævus Pilosus.—This refers to certain pigmentary nevi upon which there is more or less of a hairy growth. The lesions are usually dark and slightly raised, and sometimes there will be a considerable number of rather large hairs. As these latter are carefully treated by *electrolysis* the pigmentary lesion also diminishes.

E. HYPERTROPHY OF THE NAILS

The nails may become affected in many diseases—*eczema*, *psoriasis*, *dermatitis exfoliativa*, also after *neuritis* and *myelitis*, *chronic rheumatism*, etc.—when hypertrophied the condition receives the name *onychauxis*; atrophic alterations will be considered later.

Onychauxis.—Various degrees of hypertrophy of the nails may be observed; when greatly overgrown they may become curved or twisted (*onychogryphosis*), and cases are on record where such have attained great size. Moderate thickening is most commonly observed on the toes, due to wrong foot covering.

C. ATROPHIC DISEASES OF THE SKIN

This class is divided into four groups, relating to atrophy of pigment, of corium and epidermis, of hair, and of nail.

A. ATROPHIES OF PIGMENT

Three conditions are placed here: *Albinismus*, *leukoderma*, and *canities*.

1. Albinismus (*Albinism*, *Leukasmus Universalis*, *Congenital Leukopathia*).—This is a congenital condition found in those called *albinos*, in whom there is an absence of pigmentary matter not only in the skin but also in other portions of the body; the skin is of a milky white, the hairs everywhere are white, or of a very light color, and

the eyes have a peculiar pinkish or bright red color, and are very sensitive to the light, owing to absence of pigment in the iris and choroid. It is most common in the negro race, and in the same family some children may be black and the others perfect albinos.



Fig. 52.—Leukoderma.

2. Leukoderma (*Vitiligo, Leukopathia Acquisita, Cutis Variegata, Piebald Skin*).—This consists of an irregular distribution of the coloring-matter of the skin, whereby smooth, rounded, white patches of varying size and extent are produced, surrounded by an area in which the pigment

is augmented. It is perhaps most common on the face and hands, but any portion of the body may be affected, and occasionally a considerable portion may be so changed that they are exhibited as "*spotted men*." It is a harmless, though troublesome affection, and generally resists all local treatment, but prolonged neurotic, constitutional measures may control it.

3. **Canities** (*Grayness of the Hair*).—While this is commonly a sign of old age, it may occur at any time of life, and prolonged grief and trouble may cause the change early; great fright or sorrow has also produced this result in a brief time. It is not very uncommon to have tufts of gray hair along neuralgic tracts, and the hair on *leukodermic patches* is usually white. Little is known as to the causes for this change other than nervous, nor for the early appearance of single or multiple white hairs amid those of normal color.

B. ATROPHIES OF THE CORIUM AND EPIDERMIS

Three affections are recognized here: *Atrophia cutis*, *atrophia cutis senilis*, and *xeroderma pigmentosum*.

1. **Atrophia Cutis** (*Atrophoderma*).—Atrophy of the skin may occur as a more or less general condition in connection with other diseases, and is seen to follow injury of nerves (*dystrophia cutis*). Atrophy of the skin, as here considered, may appear symptomatically, as in the *lineæ albicantes*, on the abdomen, after pregnancy, etc., or *idiopathically* without known cause. Such are the *striæ atrophicæ* and *maculæ atrophicæ*, which appear as separate, white, slightly depressed streaks or spots, long or rounded, which may be found in any situation. They evidently depend upon defective innervation, as does also *hemiatrophia facialis*.

2. **Atrophia Cutis Senilis**.—Senile atrophy of the skin is mainly important as being a factor in the causation of *pruritus*, which is common in old age. The whole skin is more or less thinned, with atrophy of the papillary layer,

alteration in the oil glands, and a diminution in the elasticity and extensibility of the whole integument.

3. Xeroderma Pigmentosum (*Atrophoderma Pigmentosum*).—This curious and rare disease shows many clinical symptoms. It usually begins in childhood with the development of yellowish-brown, freckle-like spots, first on exposed surfaces; with these are developed small red, angiomatous or vascular points, and white, shining, cicatrice-like areas, and a general parchment-like condition of the skin, with some scaling. As the disease progresses warty excrescences develop, which later assume the character of *epithelioma* or *sarcoma*, and may ulcerate and cause death. Nothing is known as to the cause of the disease, and treatment generally proves unavailing.

C. ATROPHIES OF HAIR

Four diseased states are found in this group: *Ordinary alopecia*, *alopecia areata*, *trichorrhexis nodosa*, and *fragilitas crinium*.

1. Alopecia (*Alopecia Prematura*, *Simplex* or *Vulgaris*, *Defluvium Capillorum*).—Baldness may result from many different diseases and represent different characteristics; these cases are called *symptomatic*, other cases of ordinary falling of the hair are spoken of as *idiopathic*.

Symptomatic Baldness.—The hair may fall after fevers or severe illness, also after pregnancy, and from a number of diseases affecting the scalp. These latter are *dermatitis seborrhæica*, *eczema*, *erysipelas*, *favus*, *lupus erythematosus*, *psoriasis*, *ringworm*, *seborrhea*, and *syphilis*. Space does not admit of describing the peculiar characteristics of each; in most of them the hair will regrow under proper treatment, but in *favus* and *erythematous lupus* the hair will not reappear over the scarred areas. *Dermatitis seborrhæica* is the most fertile cause of temporary baldness, and this and also that from *syphilis* will cease and the hair regrow when the disease is overcome. In the earlier stages of syphilis the hair may fall in a peculiar, patchy character, giving a moth-eaten appearance. Much of the

reputation of so-called "*hair restorers*" rests on an apparent success in restoring the loss of hair caused by fevers, erysipelas, pregnancy, etc., inasmuch as a spontaneous reproduction of hair tends to take place when these are past.

Idiopathic Baldness.—Advancing age, as all know, tends to loss of hair, from failure in nutrition provided by the hair papilla. The same failure takes place in younger years from various causes, which require careful medical attention to discover and rectify; severe nervous strain, also continuous and severe mental application can cause this, as likewise debility and imperfect digestion. Generally it will occur in those in seeming good health, but there must be a cause for everything, and the trouble is due to poor vitality in the deep-set hair papilla, which does not form a perfect hair, capable of retaining its hold on the scalp. Local applications do not reach this, though with proper massage, by stimulating the circulation and relieving tension, they can aid materially; alone, however, they are seldom effective. It is well to remember that when the hair falls the hair-producing papilla remains, and can often be stimulated to proper action by suitable internal and external measures. We know that when superfluous hairs are simply extracted from a woman's face they regrow with even increased vigor.

2. *Alopecia Areata* (*Area Celsi*, *Tinea Decalvans*, *Pelade*).—This is quite a different affair, and is a distinct disease of nervous origin, although it commonly appears in those in apparent health. It occurs by the sudden development of perfectly bald areas, $\frac{1}{2}$ inch or more in diameter, smooth, white, and shiny. These may remain and increase in size until in certain cases the entire scalp is perfectly bald; the eyebrows and beard may likewise be affected, and occasionally other parts of the body. Sometimes the trouble ceases spontaneously in certain places, while other patches develop anew. As the hairs regrow under treatment they are fine and downy at first, but later become natural. Some observers have considered the

disease to be caused by a vegetable parasite, to which the name *Microsporon Audouini* has been given. The disease is fairly common, forming nearly 1 per cent. of the 30,000 cases analyzed. It is more frequent in males than females, the youngest patient was a girl of four and the oldest a man of seventy. *Ringworm* will occasionally exhibit



Fig. 53.—Alopecia areata.

quite bald, smooth patches, "bald ringworm," much resembling alopecia areata, as will also early *syphilis*.

3. *Trichorrhesis Nodosa*.—In this there is a peculiar alteration in the shaft of the hairs, principally toward the ends, at which the hair will readily break, leaving a brush-like extremity; the nodosities are of a whitish appearance, and there may be several on one hair. It is more common in women, but may attack the mustache and beard. Little or nothing is known as to its cause, but it will cease

under proper internal tonic treatment, with local applications suitable for ordinary alopecia.

4. **Fragilitas Crinium.**—Here the hairs break easily, often stripping down the shaft. In other instances they break at their exit from the skin, and the illy growing hair irritates the follicle, and may curl beneath the epidermis, causing considerable irritation.

A number of curious misgrowths of the hair have been reported, such as *monilethrix*, in which the shaft presents a series of fusiform swellings; also *ringed hair*, where there are alternate bands of white and color, the shaft being normal in size and shape.

D. ATROPHIES OF THE NAIL

Two conditions are noted here: *Onychatrophia* and *leukopathia unguium*.

1. **Onychatrophia** (*Mollities Unguium*).—In *psoriasis* the nails are apt to be covered with little pits or apparent erosions, and in *eczema* they may be malformed and thinned, or also thickened, and very fragile. In *tuberculosis* the nails are thin and apt to be curved, and as an idiopathic condition we occasionally find the nails thin and fragile; in some cases the nails are furrowed lengthwise. After severe illness an atrophic furrow across the nail may appear as the nail is growing out, corresponding to the date and duration of the illness. All these changes have to do with errors of nutrition, and commonly improve or disappear with restored health. Local treatment affects the substance of the nail very little.

2. **Leukopathia Unguium.**—The white flecks or clouds seen on some nails are due to changes in the structure of the nails from unknown causes. They are more apt to be seen in those of a gouty or rheumatic tendency. Little or nothing can be effected by treatment.

A word may be added in regard to the care of the nails. While it is desirable to have them appear as shapely and attractive as possible, much harm often results from excessive *manicuring*, which may be done by inexperienced

persons. The custom of working around the base of the nail, and pushing back the slight cuticular tissue found there, is an unnatural procedure, and is sometimes injurious to the growth of the nail, and results in an inflammation which may even distort the shape. Proper trimming and polishing the surfaces need not be harmful, but too much working beneath its free extremity can also cause an inflammation which may prove troublesome.

CHAPTER XI

NEOPLASMATA, NEW GROWTHS IN THE SKIN

Two subdivisions occur here, relating to *benign new growths* and *malignant new growths*, differing in their ultimate tendency.

I. BENIGN NEW GROWTHS

The diseases in this division give trouble by their presence and unsightly character, rather than by their causing great pain or destroying life. Seventeen diseases are thus classed, in eight subgroups, according as they relate to the various structures of the skin.

A. NEW GROWTHS OF CELLULAR TISSUE

Here are six diseases: *Lupus vulgaris*, *tuberculosis verrucosa cutis*, *scrofuloderma*, *lupus erythematosus*, *rhinoscleroma*, and *molluscum*.

1. **Lupus Vulgaris** (*Lupus Exedens*, *Lupus Tuberculosis*).—This has no connection with syphilis, although the name *syphilitic lupus* is sometimes given to *tubercular syphilis*, which, again, has no connection with tubercle bacilli. True lupus is rare in this country, and is twice as frequent in females as in males; it generally commences in young life, and very rarely begins after fifty. It is characterized by the deposit of cellular elements, forming reddish or brownish masses, which are soft and pulpy, sometimes spoken of as “apple-jelly-like,” which are followed by cicatrices. It is most common on the face and may cover larger or smaller areas, gradually spreading, with quite sharply defined borders; in older cases the center may clear, leaving a more or less scaly, cicatrized



Fig. 54.—Lupus vulgaris.



Fig. 55.—Lupus vulgaris.

surface. It is recognized as a local manifestation of tuberculosis, and is very rebellious to treatment.

2. Tuberculosis Verrucosa Cutis (*Verruca Necrogenica, Postmortem Tubercle*).—While lupus vulgaris is the expression of irritation from tubercle bacilli active from within, this represents that caused by local inoculation of the same, and generally remains localized. It appears mainly on the hands of those who have had to do with dead animal matter, beginning with an abrasion slow to heal, and developing slowly into a hard, slightly raised, more or less of a warty condition, with a violaceous border.

3. Scrofuloderma.—This relates to indolent, dark, reddish masses in the skin, which slowly suppurate, and often form ulcerations slow to heal. While the term *scrofula* or *struma* belongs rather to past times, and is hard to define exactly, there is a sluggish state of the system, with tendency to enlargement of the lymphatic glands, which seems to give rise to certain skin lesions to which the above term is applied. This is closely allied to the state or condition of the system in which the tubercle bacilli and pus organisms readily find a fertile field for development.

4. Lupus Erythematosus (*Lupus Erythematoses, Seborrhæa Congestiva*).—This is to be clearly differentiated from *lupus vulgaris*. It is characterized by patches of congestive redness and smoked-ham color, tending to become covered with grayish-brown, adherent scales, which when forcibly removed show prolongations on their under surface, extending into the gaping ducts of the sebaceous glands. The margins are pretty sharply defined when the disease has lasted some time, but at first there may be only a chronic erythematous redness. It is most common on the face, and, beginning with a small spot, others may develop, often symmetrically, on each side of the face, which with others forming on the nose gives a peculiar appearance, to which the name "*butterfly disease*" has been given. It is a very rebellious affair.



Fig. 56.—Lupus erythematosus.



Fig. 57.—Lupus erythematosus.

5. **Rhinoscleroma**.—This curious and very rare affection consists of a very hard, dense formation about and in the nose and its immediate neighborhood, of either normal color or brownish-red shade, and may be flat or raised into prominences. It has little tendency to ulcerate, but is extremely rebellious to treatment.

6. **Molluscum Contagiosum** (*Molluscum Sebaceum*).—This consists of small, pearly, slightly reddened, globular masses, projecting a little from the skin, commonly with an opening in the center, from which can generally be squeezed a cheesy or milky substance. There may be one or many, and they may increase slowly in size, or remain stationary for a long time; they seldom are painful, but may become irritable or chafed. They are more common in children, about the face, eyes and temples, but also elsewhere. The disease is very mildly contagious, but we have never had a nurse infected.

B. NEW GROWTHS OF CONNECTIVE TISSUE

Three diseases are grouped here: *Keloid*, *fibroma*, and *xanthoma*.

1. **Keloid** (*Kelis*, *Cheloid*).—This is a flat or rounded growth, smooth and firm, generally elevated, of a reddish color, and of various shapes and sizes, usually presenting claw-like projections, whence the name (*chelis* or *crab*), and bearing much resemblance to a cicatrice from a burn. Writers often speak of a *spontaneous* or *true keloid* and a *cicatricial* or *false keloid* following ulcerative lesions or incisions; but the disease is the same, and probably in every instance it originates in an injury; the front of the chest is a favorite location. The cause is unknown, but relates to some peculiarity of tissue of the individual, for when removed surgically they return in the scar.

2. **Fibroma** (*Molluscum Fibrosum*, *Molluscum Pendulum*).—This represents soft, roundish tumors of various sizes, either embedded in the skin or pedunculated, and of the color of normal skin, except when irritated. There may be a single one or multitudes; over three thousand



Fig. 58.—Keloid.



Fig. 59.—Fibroma molluscum.

have been counted on a single person. When the pedicle is small they can be readily tied off with a silk thread or snipped off, and generally do not return.

3. **Xanthoma** (*Xanthelasma*, *Vitiligoidea*).—This represents one or several spots or patches of yellow or buff-colored tissue, either on a level with the skin or slightly raised, smooth and velvety on the surface. It occurs most commonly on the eyelids, but may affect other portions; it is much more frequent in females than in males, and is rare in children.

C. NEW GROWTHS OF FATTY TISSUE

Lipoma.—Fatty tumors are really beneath the skin proper, and in the *panniculus adiposus* of the skin. They are soft and flabby, having rather indefinite outlines, with normal skin over them. They may be any size, from that of a large pea to that of half an orange or larger.

D. NEW GROWTHS OF MUSCULAR TISSUE

Myoma (*Dermatomyoma*).—This rare form of cutaneous tumor starts chiefly from the *arrectores pilorum*, or the minute muscles, already described, as connected with the hairs. The little tumors are slightly raised, and of the color of the skin, or slightly reddened and elastic to the touch; they are generally painful and sometimes give rise to paroxysmal suffering.

E. NEW GROWTHS OF BLOOD-VESSELS

Three diseases are placed here: *Nævus vasculosus*, *angioma cavernosum*, and *telangiectasis*.

1. **Nævus Vasculosus** (*Nævus Sanguineus*, *Claret Stain*, *Port-wine Mark*, *Mother's Mark*, *Birth-mark*).—This consists of a new growth of cutaneous blood-vessels or capillaries, commonly congenital or appearing soon after birth, presenting different appearances, and varying from a trifling disfigurement to a hideous deformity, generally on the face. The color varies from an arterial red to a

bluish purple. Considerable scarring must always be expected from any procedure employed to remove it. Very ridiculous ideas are prevalent as to the causes of the marks, which have no relation to prenatal conditions or happenings to the mother, although this idea is still held by some.

2. **Angioma Cavernosum.**—This is really only a deeper and more aggravated condition of the previous trouble. Here the lower and larger blood-vessels are affected, and there is more or less of a tumor in the skin and projecting a little above it. The surface may be of a normal color or reddened with superficial, dilated blood-vessels. On palpation the tumor sinks in on pressure, often seeming to present quite a cavity, which immediately refills with blood.

3. **Telangiectasis.**—In distinction from congenital vascular growth or *nevi*, this term is applied to new growths of blood-vessels which appear later, generally in early adult life. Various forms and degrees are observed; the slightest is that appearing generally about the face as a minute red dot, from which several small vascular lines radiate, the *naevus araneus*, or *spider nevus*. Frequently a telangiectasic condition of dilated and tortuous capillaries will appear about *cicatrices* or *scars*. This state of enlarged capillaries is often seen upon the nose and cheeks, and to this the term *rosacea* has been applied. Prolonged exposure to x-rays also produces such dilated capillaries.

F. NEW GROWTHS OF LYMPHATICS

Lymphangioma Circumscriptum (*Lymphangiectodes*).—This very rare affection exhibits deep-seated, non-inflammatory, lymphatic vesicles, of peculiar appearance, occurring in patches. The lesions are slightly raised and flattened; they may be of a pale-straw color or pinkish, and occasionally of a purplish hue from dilated blood-vessels. On palpation they are soft and the finger sinks in, but the cavity very soon refills; on puncture a clear, alkaline fluid exudes, containing lymph corpuscles.

G. NEW GROWTHS OF GLANDULAR TISSUE

New growths of the sweat and oil glands—*hydradenoma* and *adenoma sebaceum*—have been already considered in connection with glandular diseases of the skin.

H. NEW GROWTHS OF NERVES

Neuroma Cutis.—This rare affection presents small, firm, flattened tubercles, packed together or irregularly disseminated, which may be of the color of the skin or reddened and with a roughened surface. Beginning with itching, later there may be pain, which is paroxysmal and very severe, radiating from the part. In some instances there is a single, small "*subcutaneous painful tubercle*," which is a fibrous growth of the nerve sheath.

II. MALIGNANT NEW FORMATIONS

Six diseases are grouped here, all marked by a malignant character, tending in the end to destroy life; these are: *Epithelioma*, *carcinoma*, *sarcoma*, *mycosis fungoides*, *yaws*, and *lepra*.

1. **Epithelioma** (*Epithelial or Cutaneous Cancer, Rodent Ulcer*).—Epithelioma presents so many forms and appearances in its different stages that it is difficult to briefly describe it, and cases differ greatly in malignity. The beginning is always very small and its real nature is not recognized for some time. The disease may start from a mole or wart, or from a hardened sebaceous concretion, or as a scaly patch which bleeds slightly when the crust is torn off. Soon greater infiltration occurs and ulceration, and in its progress small, pearly margins appear, which are characteristic of the disease. Sometimes it may remain quiescent, but when irritated by injudicious treatment, as nitrate of silver, the edge becomes hard and elevated, the ulcer extends and deepens, and great destruction of tissues, even of the bones, may result (*rodent ulcer, Jacob's ulcer, noli-me-tangere*). The face is the most common seat of epithelioma, but no portion of the body is exempt; on the lower lip it is always a serious affair.



Fig. 60.—Epithelioma of eyelid.



Fig. 61.—Epithelioma of nose.

Paget's disease of the breast or nipple (*malignant papillary dermatitis*) is really an epithelioma, which may end in deep cancer of the breast.



Fig. 62.—Epithelioma of ear.



Fig. 63.—Epithelioma of cheek.

2. **Carcinoma Cutis.**—Cancer of the skin commonly arises as a secondary deposit or *metastasis*, in connection with cancer of other organs, chiefly of the breast, and especially after its surgical removal. It is characterized by the appearance in the skin of small, very hard masses, soon becoming of a pinkish or reddish-brown color, with some hardening of the tissue between; the little kernels are painful when pressed on. In its further progress a diffuse induration occurs, principally on the chest, *cancer en*



Fig. 64.—Multiple epithelioma.

cuirasse, when there is a diffuse hardness, which may contract so as to interfere with respiration, and to so press on the blood- and lymph-vessels as to cause swelling of the arms and much pain, and to end fatally.

Carcinoma melanodes (*melanotic cancer*) is a malignant form of disease, often starting from a pigmentary mole and invading the whole system.

3. **Sarcoma Cutis.**—This is a very rare affection, forming deep, rounded masses, with a tendency to reach the

surface and ulcerate, and to gradually infect the system and destroy life. When it is of the pigmented variety (*melanotic sarcoma*) the lesions acquire a bluish hue. While epithelioma and carcinoma are diseases of the epithelial elements of the skin and glands, sarcoma has to do with fibrous tissues.

4. **Mycosis Fungoides** (*Granuloma Fungoides, Inflammatory Fungoid Neoplasm*).—This curious and rare affection appears very differently at its various stages. In the early, “*premycotic*” stage, erythematous, itchy patches appear, often resembling *urticaria*, which, however, persist and become scaly. Later more solid, flat lesions appear, which are at first smooth and shiny, and pulpy to the touch, of a peculiar, purplish pink; these gradually increase in size and height, and break down superficially, becoming moist and crusted. It is an extremely rebellious disease, commonly ending fatally in a few years.

5. **Frambesia** (*Yaws, Pian*).—This is a tropical disease, and rarely if ever seen in this country. It resembles syphilis in some of its features, and is considered by some as a modified form of that disease. Those who know the disease claim that it is different, and due to the *Spirochæta pertenuis*, which resembles but differs from the *Spirochæta pallida* of syphilis. There is first a primary sore, which becomes pustular, dries up and crusts, then a papular eruption, becoming pustular, and beneath the crusts which form the lesions become fungating, or “*raspberry-like*,” whence the name frambesia.

6. **Lepra** (*Elephantiasis Græcorum, Leontiasis, Leprosy*).—This is a constitutional, malignant disease caused by the entrance and development of the *lepra bacilli*. The mode of entry of the parasite has not been fully established, but many, including the present writer, believe that it is conveyed through the medium of infected fish, imperfectly cooked, as the oyster conveys typhoid fever; the mosquito, yellow fever and malaria; and lice and fleas convey other diseases.

Three forms of leprosy are spoken of: *Lepra maculosa*,

tuberculosa, and *anæsthetica*, but the disease is identical in every instance, and all forms may appear in the same individual at once.

Lepra maculosa first shows slightly elevated, red macules of some size with ill-defined margins; later they become brownish red and tend to clear in the center as they enlarge.



Fig. 65.—Leprosy.

Lepra tuberculosa is the form most commonly seen in this country, when irregular masses of varying size form, often first in the lobes of the ears, on the nose and forehead; when the latter location is much affected the patient has a strange appearance (*leontiasis*), a supposed likeness to a lion. In later stages almost every portion and organ of

the body may be affected, the *bacilli lepræ* occurring everywhere.

Lepra Anæsthetica.—This form is seen most commonly in countries where the disease is endemic. The nervous tissues seem to be most affected, and all parts feel numb and insensible. Nutrition is interfered with and the fingers and toes separate and are lost, one by one, without pain, the stumps healing perfectly (*lepra mutilans*), or the hands may become shrunk and distorted (*leper claw*).

Leprosy is not contagious; during nearly forty years lepers have been shown at the clinics and freely admitted to the New York Skin and Cancer Hospital, in wards with other patients, and no nurse or other person has ever acquired the disease. It is also the universal testimony from leper asylums, and from those who see the disease in leprous countries, that it is not transmitted from one person to another; families with many healthy children are known to have one or the other parent affected, and the other remain free even for forty years. The Board of Health of New York City has repeatedly given written permission for leper patients to enter the city and remain, and has never exercised any control over them, although some other portions of this country have been affected with a *lepromania* or *leprophobia*, leading to the arrest and confinement of the poor unfortunates, which is as cruel as it is senseless.

CHAPTER XII

DIET AND HYGIENE IN DISEASES OF THE SKIN

THAT the improper use of articles of food and drink can produce eruptions on the skin is familiar to all, and that nurses can be of the greatest service in guarding against this is equally certain. As examples may be mentioned the *acute erythema* or *urticaria* occasionally resulting from eating certain varieties of fish, particularly shell-fish, also at times from mushrooms, bananas, strawberries, raspberries, etc.; in some individuals the eruption will appear whenever these are eaten, in others only when the articles are stale, or again, when they themselves are in a peculiarly suitable condition. Gross indiscretions in eating, as of mince pies, fruit cake, rich cheese, nuts, etc., are constantly observed to be followed by fresh lesions of *acne*, and recent laboratory studies have demonstrated the *anaphylactic* or antagonistic action of many substances of food in connection with *eczema* and other eruptions. Also many drugs taken internally, such as iodine and bromine compounds, copaiba, quinine, belladonna, veronal, and others, frequently produce cutaneous eruptions.

In like manner, chronic or habitual errors in diet can induce alteration in the skin nutrition, although the extent to which this happens and the manner in which it occurs may not yet be clearly defined. As a more striking illustration may be mentioned the effect of the diet of salted meat and hard tack on sailing vessels in producing *scorbutus* or *scurvy*.

A striking illustration of the beneficial influence of diet in certain inflammatory diseases of the skin, such as *acute eczema*, *erythema multiforme*, etc., is seen in what is known as the *rice diet*, which I introduced and have advocated for many years. But in order that it be thoroughly effective it must be carried out rigorously in

exactly the right manner, for I have often seen it erroneously used; to this end a few words are necessary.

This rice diet consists in the absolute and only use of *rice*, *bread*, *butter*, and *water* three times daily for a period of five to ten days or longer. By this means all possibly injurious articles are excluded and an absolutely non-nitrogenous diet is secured, and brilliant results are often obtained. The rice is to be well boiled in water, rather mushy, and eaten very hot, on a hot plate, slowly, with a *fork* and not a spoon, and chewed or masticated very thoroughly, to secure the action of the saliva, which is necessary for the proper digestion of starchy food. This is eaten with plenty of *butter* melted on it, and I specify that $\frac{1}{4}$ pound, in three portions, shall be taken during the day; no milk or sugar. The *white* bread should be twenty-four or, better, forty-eight hours old, with plenty of butter on it, and should also be masticated very thoroughly; I prescribe that fully half an hour should be consumed at each meal; $\frac{1}{2}$ pint of *water*, cold but not iced, should be drunk with each meal, but not to wash down food, but taken between mouthfuls and afterward. In addition to this I give two $\frac{1}{2}$ pints of *hot water*, taken alone, one of them one hour before both the morning and the evening meal; this is to supply the amount of liquid necessary for the urine and sweat. Unless all these directions are accurately carried out the result will not be the best.

In order that the nurse may rightly understand the why and wherefore of proper diet in diseases of the skin (which she will often be called on to follow out) a few medical explanations are necessary.

All nutrition, whether in health or disease, is carried on by a series of chemico-physiologic changes occurring within the system through what is known as *metabolism*. This is composed of *anabolism*, whereby nutritive material and oxygen, taken in by the lungs, are converted into an integral part of living tissue, and second, *catabolism*, whereby their potential energy is expended in living force and heat, and the products of physiologic disintegration of

tissue are rejected, in altered form, and appear in the excreta; life and health are maintained by proper and correct metabolism, which is properly carried on by the various organs of the body, in the state of health. Disease occurs from the wrong action of one or more of these organs, and the food which is taken modifies the action of these organs; there may be gross errors of metabolism without any manifest disorder of primary digestion in the stomach itself. Hence we see the importance of the nutritive elements which may be introduced as food or luxuries.

A healthy appetite and good common sense should ordinarily be sufficient guides in the matter of diet, but, unfortunately, one or both of these may be lacking; moreover, the refinements of civilization have added greatly to the temptation of overeating, as well as wrong eating and drinking, as they do to many other temptations. Witness the very common remark, when a tempting dessert is offered, "Oh, I have had enough to eat, but that looks very good, and I will try a little," and so the poor digestive organs are taxed just so much beyond their powers. Few persons distinguish between *appetite* and *taste*; they gratify their *taste* long after the *appetite* is *satisfied*. In connection with many skin diseases diet has a very broad meaning, and signifies *such a regulation of the quantity and quality of food and drink taken, its mode of preparation, and the time and method of its consumption, as shall conduce to the restoration and maintenance of the health of the body, including the skin.*

It would be difficult to discuss the matter of diet in connection with all or many of the diseases which have been mentioned in the preceding pages, but a few important items may be mentioned.

Eczema has been called the "*keystone of dermatology*," and a brief consideration of dietary matters as related to the disease will throw light on those of other affections of the skin.

In infants at the breast too frequent feeding is a common cause of the aggravation of *eczema*, if not of its production,

when the breast or bottle is given every time the child cries or is restless with itching or otherwise; this should be restricted to two hours' interval at the least.

But, again, the nourishment may be imperfect from the quality of the breast milk, which depends on the *mother's* diet. Those nursing eczematous children are often found to be taking beer, porter, wine, or tea, coffee, chocolate in order to increase the breast milk; these should be prohibited, and warm milk drunk alone, and pure, *one hour before each meal*, and during the night, every time the baby nurses. Dyspepsia, constipation, or debility in the mother also often cause eczema in nursing children.

Many infants with eczema are fed erroneously on animal matter, in the form of eggs, beef extract, etc., which are given far too freely, and occasionally they get even portions of the food of adults from the table. Milk, properly prepared, is undoubtedly the proper and best food on which to build up animal tissues, as it contains all the elements of perfect nutrition. Many or most of the advertised foods are a delusion and a snare, though sometimes the eczematous infant will seem to require something more than pure milk, and various preparations and combinations have often been advocated by reputable physicians. There is one preparation which I devised over thirty years ago, and have used in hundreds of cases with remarkable results, which I think should be more widely known, which has the additional advantage of being cheap, so that the poor can afford it as well as the rich.

Wheat has long been recognized as containing all the elements necessary to nourish the human frame, but in white bread we get only about 70 per cent. of the grain, namely, the starchy matter, while the gluten-containing protein and the mineral elements are removed in making white flour. The desire was to get the whole wheat in a form ready for easy assimilation, which is accomplished by the plan to be described, which plan should be followed most accurately for the preparation of what I have called "*wheat jelly*."

The wheat jelly is prepared as follows: About a cupful of crusted or rolled wheat (Pettijohn or shredded wheat biscuits crushed answer fairly well) is placed in 1 pint of cold water, in a double boiler, and put on the fire at 10 A. M. This is allowed to slowly boil until evening, when it is set aside, covered up, until morning. Sufficient hot water is then added to make a soft mass, and it is boiled until 10 A. M. This soft mass is then placed in a *very fine* sieve, and rubbed through it with the bowl of a spoon, and the resulting wheat jelly is scraped off for use during the day, it being freshly prepared daily. One to 3 or 4 teaspoonfuls of this is used in milk at each feeding, according to the age of the child and the requirements of the case; sometimes it proves quite laxative. It readily passes through the feeding bottle, and in some instances it is desirable to give it alone, in a spoon, slightly salted, and a little sweetened with sugar of milk.

The *rationale* of the preparation is not difficult to understand. Soaking first in cold water swells the starch grains, and prolonged slow boiling cooks them thoroughly, while it extracts the soluble protein and mineral constituents from the germ and the crushed bran coating. Being then left to cool all night there is more or less diastasic fermentation, and in the morning it is jellified and has a sweetish taste. By again boiling in the morning this process is arrested, and a homogeneous jelly is formed, already partly digested, and in a form to be readily assimilable; thus we get all the valuable qualities of the wheat kernel. While the process may seem a little tedious, I seldom find difficulty in having it carried out perfectly, even among the poorer classes. The jelly does not keep well, and should be prepared fresh every day.

In regard to the diet of adults with eczema it is hard to speak briefly and definitely, the conditions are often so varying. In acute eczema the *rice diet*, already mentioned, will often produce almost magical results if exactly carried out, and occasional periods of it, for five or ten days, will sometimes be of service in more chronic cases. As a rule,

a non-protein diet of vegetables, cooked fruits, and cooked cereals, with butter and salt, no sugar or milk, eaten with a *fork*, and thoroughly masticated, is a great help in treatment.

A few words regarding the use of milk in eczema and many other skin diseases may not be out of place. It is a common observation that many persons cannot take milk in the ordinary way, cold and with other food, without producing in them a condition which is known as "*biliousness*," and for years I have noted that certain eruptions were aggravated when milk was freely and carelessly indulged in; but, on the other hand, I have for years observed in many hundreds of instances that these same persons could use milk on *exactly* the plan here proposed without this result, and with only the most inestimable service.

Not to go into an elaborate medical discussion of the physiologic explanation of the *rationale* of the plan advocated, I will briefly describe the method of procedure. The milk is to be taken warm, not boiled, pure and alone, *exactly one hour* before one or all of the meals. It is sometimes desirable, at first, to warm the milk by adding one-third of boiling water, but absolutely no food must be taken with, before, or after it, until the meal; the slightest addition defeats the success of the process by exciting gastric secretion, and so curdling the milk, which interferes with its absorption before the next meal. For when taken *exactly* as directed it rather increases the appetite and digestion, otherwise it hampers them. It is often well, in weakened subjects, for them to lie down in a darkened room after drinking the milk, and to relax and even doze for half an hour, no more, especially before the evening meal. This plan is equally valuable to use with neurasthenics other than those troubled with diseases of the skin.

Coffee, cocoa, and chocolate are often found to be harmful in *eczema* and other skin affections, and many find great benefit from their avoidance and the substitution

of one of the cereal substitutes, such as postum, with the morning meal, and water, not iced, at the other meals. Often it is desirable to give a glass of hot water one-half to one hour before eating, as it quenches the thirst, and much water with the meals, diluting the gastric juice, can thus be avoided. All forms of fermented or distilled alcoholic drinks have been shown to be prejudicial in diseases of the skin.

Soup will often be found to excite heat and itching in *eczema* and to flush the face of patients with *acne*, and increase the eruption; rich, greasy soup is more apt to have this effect, but with some patients all varieties of soup will produce the same result.

Fish is commonly supposed to be injurious and is often interdicted in skin affections, because *urticaria* is sometimes caused by shell-fish. This is quite erroneous, and fish may often be used with advantage in place of meat in *eczema* and many skin diseases, especially those exhibiting nervous phenomena.

Meat in excess is certainly harmful in *eczema* and many eruptions, and it is a delusion to think that the flesh of poultry differs essentially from that of beef and mutton; it contains almost as much protein. In *psoriasis* very remarkable results may often be obtained by the total avoidance of all these, including even eggs and milk, and adopting an *absolutely* vegetarian diet, even for a very long period of time. It has been demonstrated time and again by careful scientific tests that an exclusive vegetarian diet can supply all human needs, as it does those of the animal kingdom.

Salted meats and salted fish are rightly thought to act prejudicially in skin diseases; they should be avoided, as also pickles, olives, rich salads, stimulating sauces, etc. Hot breads are also injurious, likewise gravies and fried articles, pastry, cake, candy, sweet preserves, etc.

While certain foods are harmful and to be avoided in many diseases of the skin, it is often necessary to encourage the use of others in order that nutrition may be perfectly

maintained; which, as we have seen, is commonly at fault in many diseases of the skin, which are frequently the expression of a lowered vitality. Thus *eczema* patients are apt to dislike fatty substances, which they should be encouraged to take in place of starches and sweets; this refers to the fat of meats and butter especially, and not to fried articles; cod-liver oil and olive oil are often of great service in this trouble.

When patients are on a vegetarian diet it is sometimes difficult for them to secure exactly the right and sufficient nourishment, and the nurse, acting as a dietitian, can be of immense help in securing a *menu* which is palatable and efficient. This is especially true in cancer in any locality, even in deep organs of the body, in which an absolute vegetarian diet will often produce such remarkable results, in conjunction with proper medical treatment and without surgery.¹

Rapid eating and imperfect mastication are very fertile causes of skin trouble, and should be attended to by the nurse; Mr. Fletcher has rendered a great service to humanity by his earnest presentation of the subject, in his books and lectures, and "*fletcherize*" and *fletcherism*" are terms with which very many are familiar. The process of digestion begins in the mouth, and unless the food is properly chewed and mixed with saliva (which latter produces certain digestive changes in it) the other organs cannot do their work perfectly. Each organ has its own function, and takes up the digestive process where the preceding organ left off. The failure of one, therefore, necessitates a partial failure in the work of others.

HYGIENE

Many points relating to hygiene in connection with diseases of the skin have been mentioned in the preceding

¹ This is too large a subject to consider properly here, and reference may be made to the writer's books on the subject: "The Cause and Treatment of Cancer," Vols. I and II, P. B. Hoeber, New York, and "The Medical Treatment of Cancer," F. A. Davis Co., Philadelphia.

pages, but a few additional words may be of service. It is to be remembered that in chronic skin affections the whole system is chronically deranged, and to accomplish their cure, and to prevent their return, it is frequently necessary to alter the condition of the system. Proper exercise, rest, sleep, the air we breathe, the sleeping apartment, the dryness of the living room, sunlight, etc., are all points which may play more or less important parts in the production or continuance of diseases of the skin; and these the nurse should attend to.

Sedentary habits, with constipation, are undoubtedly the cause of many of these affections, and proper exercise should be encouraged, as a sluggish state of the system engenders *auto-intoxication*, which plays not an inconsiderable part in these troubles.

Reasonable rest after fatigue is often indispensable, and sound sleep, unbroken by dreams, which are often caused by intestinal indigestion, is essential to regenerate the system. One frequently sees cases of various cutaneous affections where nervous or physical exhaustion from want of proper rest aggravates the disease; often activities are undertaken for so-called pleasures, which are wrongly regarded as *recreation*, when rest would have been a more efficient *re-creation*. Rest and a nap, for half an hour, after taking a glass of warm milk, exactly an hour before the evening meal, as already mentioned, are invaluable in certain chronic cases, and I could give many, many cases where the transformation of the patient by this simple procedure has been simply marvelous.

The limits of this little book do not permit of further enlargement of the very important elements of diet and hygiene in diseases of the skin, but enough has been said to show that the nurse can play a very important part in guiding these patients in regard to matters respecting which many are ignorant or careless.¹

¹ For further consideration the reader is referred to the work by the present writer on "Diet and Hygiene in Diseases of the Skin," P. B. Hoeber, New York.

CHAPTER XIII

THE NURSE AND DISEASES OF THE SKIN

As already intimated, the nurse may play a most important part in the treatment of many diseases of the skin, and in my lectures to nurses at the New York Skin and Cancer Hospital I have repeatedly demonstrated many of the points which I shall try to make as clear as possible. As *eczema* will probably form a very large share of the cases to which they will be called, we will begin with this disease, and first speak of infantile *eczema*.

The itching of *eczema* has already been mentioned as its most trying feature, and in infants it is often terribly distressing, and may tax the patience of the nurse beyond measure. While local remedies can never cure the disease without proper dietary and internal measures, still very much can be effected by exactly the proper use of the right ones; much harm is often done by the employment of stronger and stronger applications, hoping to stop the itching. But the skin in *eczema* is sensitive, and soothing remedies are more often called for. Scratching and rubbing are accountable for much of the actual eruption, and the great function of good nursing is to prevent this. It is to be remembered that the itching is paroxysmal, and restraint will accomplish much in allowing the eruption to subside under the remedies employed.

Three methods are of service in securing this restraint in infants. The first, which I have employed with success in innumerable cases, is a child's *pillow case*. An opening is made at the closed end, and it is drawn over the child, the head protruding. Then the arms are secured at the sides with three stout safety-pins, and with another safety-pin between the legs the whole is held in position, so that

scratching is impossible. At first sight this seems cruel, but the child soon becomes accustomed to it, day and night, and with proper local measures is much more comfortable than if allowed to tear the affected parts.

Another way is to make a long sleeve, or cuff, of cardboard, covered with muslin, which is slipped over each arm, to the armpit, and pinned in place, so that it is impossible to bend the arm to reach the face.

A third method is by the employment of perforated, celluloid balls with an opening and a cuff attached, sold, I think, with the name "Hold Me Fast." The hands are slipped into them and the cuffs pinned to the sleeves; the smooth balls cannot irritate the skin when the child tries to rub or scratch.

The child will rub its face or head on the pillow to get relief, and will rub off the application which has been made; this cannot always be prevented, but if the faithful nurse immediately reapplies the proper ointment or lotion, even countless times, the itching subsides and the surface heals, as the rubbing is not as harmful as scratching. On covered parts the repeated application of a soothing, powdery lotion, such as the calamine and zinc, sopped on frequently with a bit of old linen handkerchief, as already described, is most effective.

In eczema of adults there are several nursing suggestions which are of great service. One is the use of *absorbent cotton* in covering applications to various parts, instead of using gauze or cotton cloth, both of which absorb the greasy element and leave the surface too dry; absorbent cotton does not absorb grease, but when the dressing is removed the ointment is all there, and the diseased portion is soft and soothed. But the layer of cotton should be *very thin*, split off, not one-quarter of the thickness of the roll being used, and it is far better to spread the ointment on the cotton with a spatula or table knife, thus making a plaster. This can easily be accomplished with a little practice by holding a piece 2 or 3 inches square on the fingers and slowly wiping the salve from the knife. In

eczema of the fingers, hands, or wherever it can be done, it is well to keep it in place with ordinary cotton *sewing thread*, which can be wound around many times, holding it in place far better than a bandage, over which a light bandage can be applied, if desired. This method of using cotton is also very serviceable about the ears, where it can be tucked in and around far better than a cloth. Also about the anus and vulva cotton thus smeared thickly with ointment can be pushed in, with the best effect. When cotton adheres to a moist or dry surface, or fibers of it remain attached here and there, it may be easily removed with a wooden toothpick or match, which is rolled around over the surface, picking up the fibers very satisfactorily after a little practice.

On the arms and legs the cotton dressing can also be used with advantage, held in place by a certain elastic *woven rubber bandage*, about 3 inches wide, which can be sewed into circlets or broad garters, and slipped on while the cotton is held in place; these should not be made too tight, but if well adjusted they work admirably, and keep in place infinitely better than a roller bandage.

In *boils* and *carbuncles* the use of a proper ointment spread on cotton is most satisfactory, and, as before remarked, for thirty years and more I have treated hundreds in this manner, to the great gratification of patients, who had previously been subjected to poulticing and cutting. In ulcerative lesions of cancer this is my universal method.

In *varicose ulcers of the leg* the *solid rubber bandage* may almost be called a specific, if it is rightly used; the bandage should be *very thin*, 3 inches wide and 5 yards long. This is applied from the toes to the knee, and by careful and patient adjusting can be made to fit like a glove, overlapping from $\frac{1}{2}$ to 1 inch; it is applied by gently stretching the bandage, but not too tight, and without reversing, as in a cloth bandage. Sometimes the heel may be covered, but not generally. This is applied in the morning while in bed, and not taken off until again in bed at night. I

generally apply it first myself, directly over the ulcer, with nothing between, though sometimes the thinnest possible film of dry cotton, with no ointment, may be laid over the ulcer with advantage.

When this is rightly applied the patient experiences the greatest relief from the tense, full sensation commonly felt, and a good amount of exercise, in walking, hastens the cure. At night when in bed the bandage is removed, and dropped into a basin with $\frac{1}{2}$ teaspoonful of carbolic acid and 2 of borax, well dissolved, in 2 quarts of warm water. The leg, which generally smells badly from the retained secretions and sweat, is then gently bathed, as also the ulcer, in this same solution, with a soft handkerchief, gently dried, and the proper ointment on cotton applied for the night, with a very light gauze bandage. The rubber bandage is then washed in the same solution, and dried by drawing through a towel, and festooned over the back of a chair to air all night. In the morning the dressing is removed from the ulcer, and every particle of ointment is carefully wiped off with absorbent cotton (as otherwise the bandage is soon spoiled) and the rubber bandage is applied as before, without putting the foot down, and worn all day. The comfort and benefit from these measures, when perfectly carried out, exceed even all that could be hoped for, and the ulcer is cured. This rubber bandage treatment is often most valuable in chronic eczema of the legs.

In former pages I have spoken rather strongly against too much bathing or washing, and I would again emphasize the fact that generally water is irritating to diseased skin. In some instances I have prevented babies with eczema from being bathed for weeks at a time, and yet the public have the idea that all skin affections are loathsome, and that water and soap are essential to their cure.

In *dermatitis seborrhæica* of the scalp, and whenever lotions are there applied, it is well to make use of a long *hair dropper*, or an ordinary medicine-dropper, as mentioned in Shampooing; in this way the medicament

reaches the diseased surface much better than if simply poured on the hair. Such applications are to be made by beginning at the crown of the head, and stroking the drop-per in every direction, following it with rubbing or massaging with the finger-tips.

The educated nurse can do much to correct erroneous impressions along many lines, and it is hoped that this little book may be of aid both in disseminating correct ideas concerning diseases of the skin and in helping nurses to assist doctors in their management of this troublesome class of diseases.

APPENDIX

By DUDLEY H. STETSON, M. D.

TECHNIC OF OBTAINING BLOOD FOR WASSERMANN TEST

PLACE a light tourniquet around the arm about 4 inches above the elbow, just tight enough to distend the veins without shutting off the pulse, and cleanse the skin at the bend of the elbow with alcohol or ether. Select a vein which is fairly straight and, if possible, one which does not move about easily under the skin.

With the thumb of the left hand about 2 inches below the point to be punctured, draw the skin over the vein down toward the patient's wrist in order to fix the vein, then, with the needle held between the thumb and forefinger of the right hand, puncture the skin over the vein with a quick thrust, then more slowly push the needle into the vein until the blood flows. With a little practice the glass tube for collecting the blood can be held with the fingers and palm of the right hand in such a manner that the blood flows directly into the tube. About 10 c.c. of blood should be collected and the tube set aside and not disturbed until the blood has firmly clotted. The tube should be labeled before the blood is drawn to avoid any possibility of confusing specimens.

TECHNIC FOR PREPARING ARSPHENAMINE SOLUTION

All the glassware used should be thoroughly cleansed and then boiled for at least fifteen minutes. New glassware is to be thoroughly scrubbed with soap and hot water and thoroughly rinsed in running water. New rubber tubing is to be thoroughly rinsed inside with running water and then soaked in normal sodium hydroxid solution for six hours before boiling. Glassware which has become stained with arspenamine can be easily cleansed by

rinsing with dilute hydrochloric acid. All glassware and tubing after boiling must be rinsed with sterile distilled water before coming in contact with the arsphenamine.

The arsphenamine tubes, or capsules, are to be tested for cracks by floating them in water; cracked tubes will not float, and should not be used. The tubes are then carefully wiped with sterile gauze wet with alcohol, and allowed to dry on a sterile towel. The file is also wiped with alcohol and allowed to dry. The tubes are then scratched with the file and broken open with a light tap. The powder is emptied into the mixing cylinder which has been partially filled with freshly boiled distilled water, cooled to room temperature. The amount of water used to dissolve the powder depends upon the amount of the drug to be prepared. The final dilution should not be less than 20 c.c. of water to each $\frac{1}{10}$ gram of arsphenamine. After the powder is completely dissolved the sodium hydroxid solution is added, drop by drop, until a dense precipitate is formed, occasionally inverting the cylinder to insure mixing, and continuing the addition of sodium hydroxid until the solution is entirely clear and of a brilliant yellow color. When this occurs add one-fifth as many more drops of the sodium hydroxid as were used to produce the clear solution. The solution is now filtered through sterile gauze and enough water added to bring the solution to the required dilution. It is then ready for use.

TECHNIC OF PREPARING NEO-ARSPHENAMINE SOLUTION

The apparatus and tubes are prepared in the manner described for the arsphenamine solution. The powder is dissolved in the same manner, but no sodium hydroxid is used. The omission of the sodium hydroxid is the only difference in the technic of preparing the two solutions.

TECHNIC OF INTRAMUSCULAR INJECTION OF MERCURY

The injection should be made in either the outer or inner upper third of the buttock, using the right and left buttock alternately.

The needle should be not less than $2\frac{1}{2}$ inches long, size No. 18 or 19. The skin at the site of the injection is to be well scrubbed with alcohol or painted with iodine. With a quick thrust the sterile needle is inserted to its full length. In very thin persons and in children an insertion of 2 inches is sufficient. Lumps and abscesses are largely caused by failure to insert the needle far enough. After the needle is in place the syringe is loaded, using another needle for this purpose if necessary. If no blood appears in the needle which has been inserted into the buttock, connect the syringe and slowly inject the mercury. If blood has appeared the needle must be withdrawn and another one inserted in a different place. After the injection withdraw the needle quickly and make pressure with dry gauze for a few minutes until all bleeding has ceased. If there seems to be danger of further oozing of blood a piece of adhesive plaster may be applied. The needles should be cleansed with gasoline or ether after use.

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